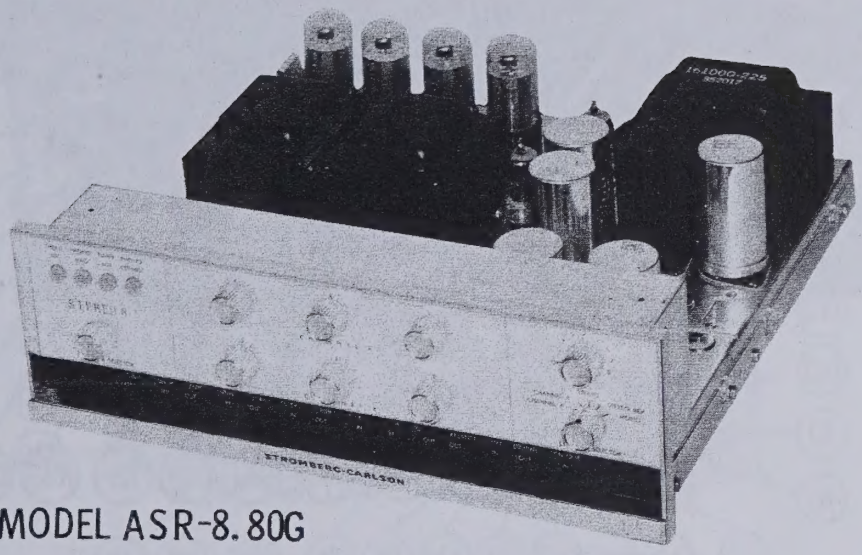
PHOTOFACT® Folder

STROMBERG-CARLSON MODELS ASE-8, ASP-80, ASR-8.80G

STROMBERG-CARLSON MODELS
ASE-8, ASP-80, ASR-8.80G



MODEL ASR-8.80G

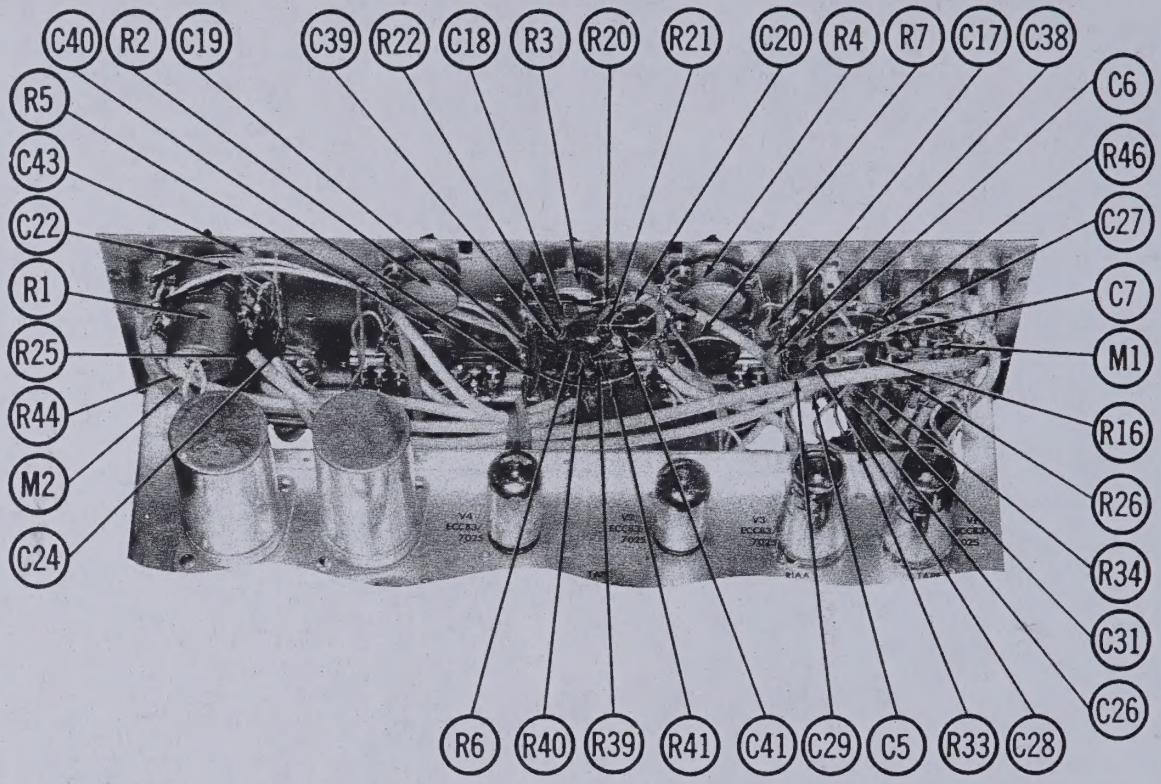
STROMBERG-CARLSON MODELS
ASE-8, ASP-80, ASR-8.80G

TRADE NAME	Stromberg-Carlson Model ASE-8 (Preamplifier), ASP-80 (Amplifier), ASR-8.80G (Combined Preamplifier and Amplifier)
MANUFACTURER	Stromberg-Carlson Co., A Div. of General Dynamics Corp., Commercial Products Div., 1400 N. Goodman Street, Rochester 9, N. Y.
TYPE SET	AC Operated 4 Tube Stereo Preamplifier and 6 Tube Stereo Amplifier
POWER SUPPLY	110 – 120 Volts AC, 60 Cycles RATING 120 Watts, 1.25 Amp. @ 117 Volts AC

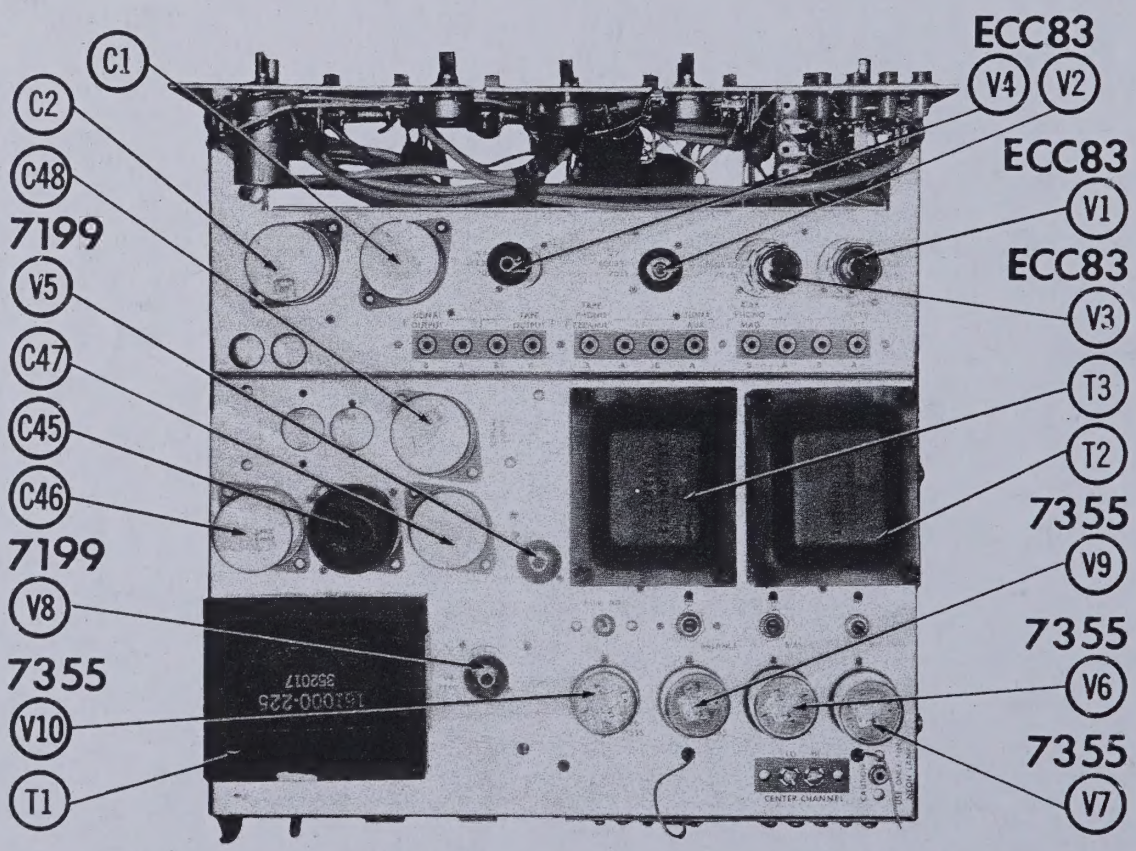
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

KV785

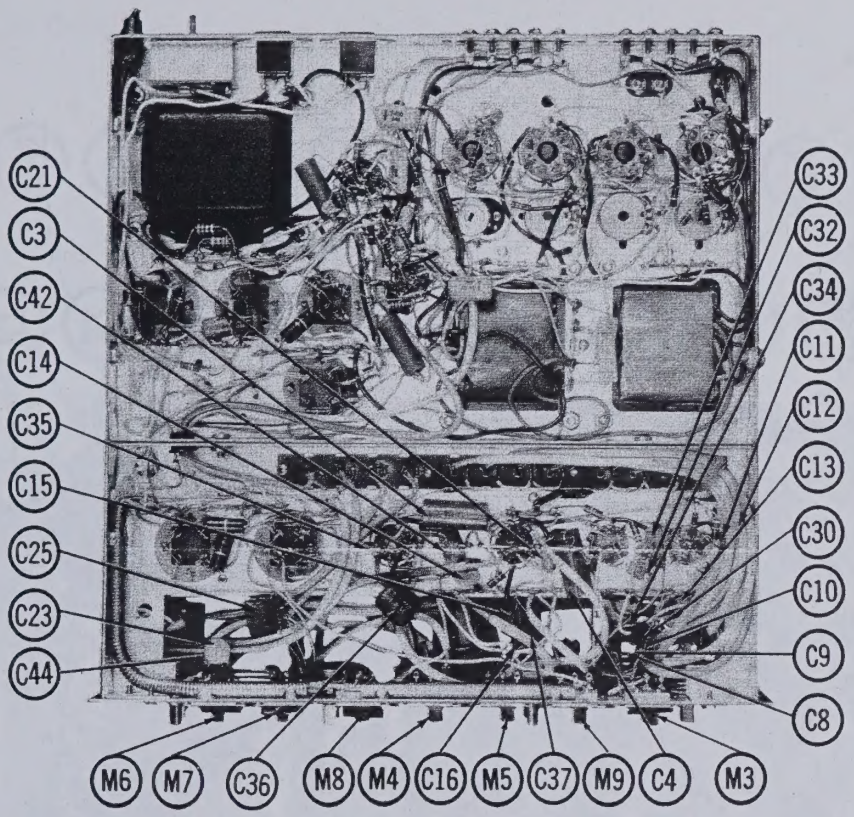
SET 557 FOLDER 12



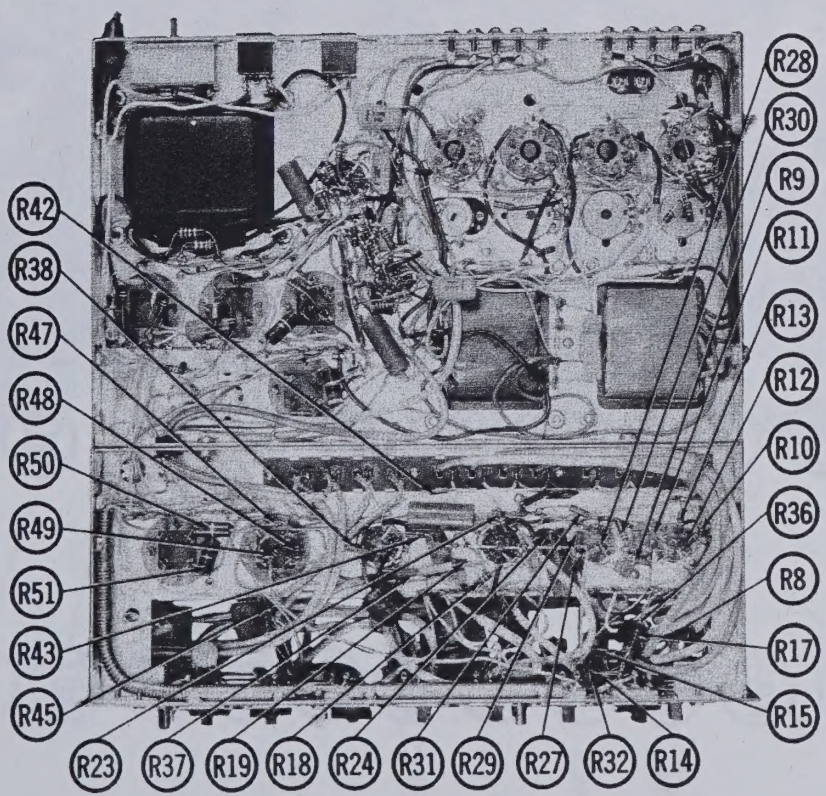
CONTROL PANEL-REAR VIEW



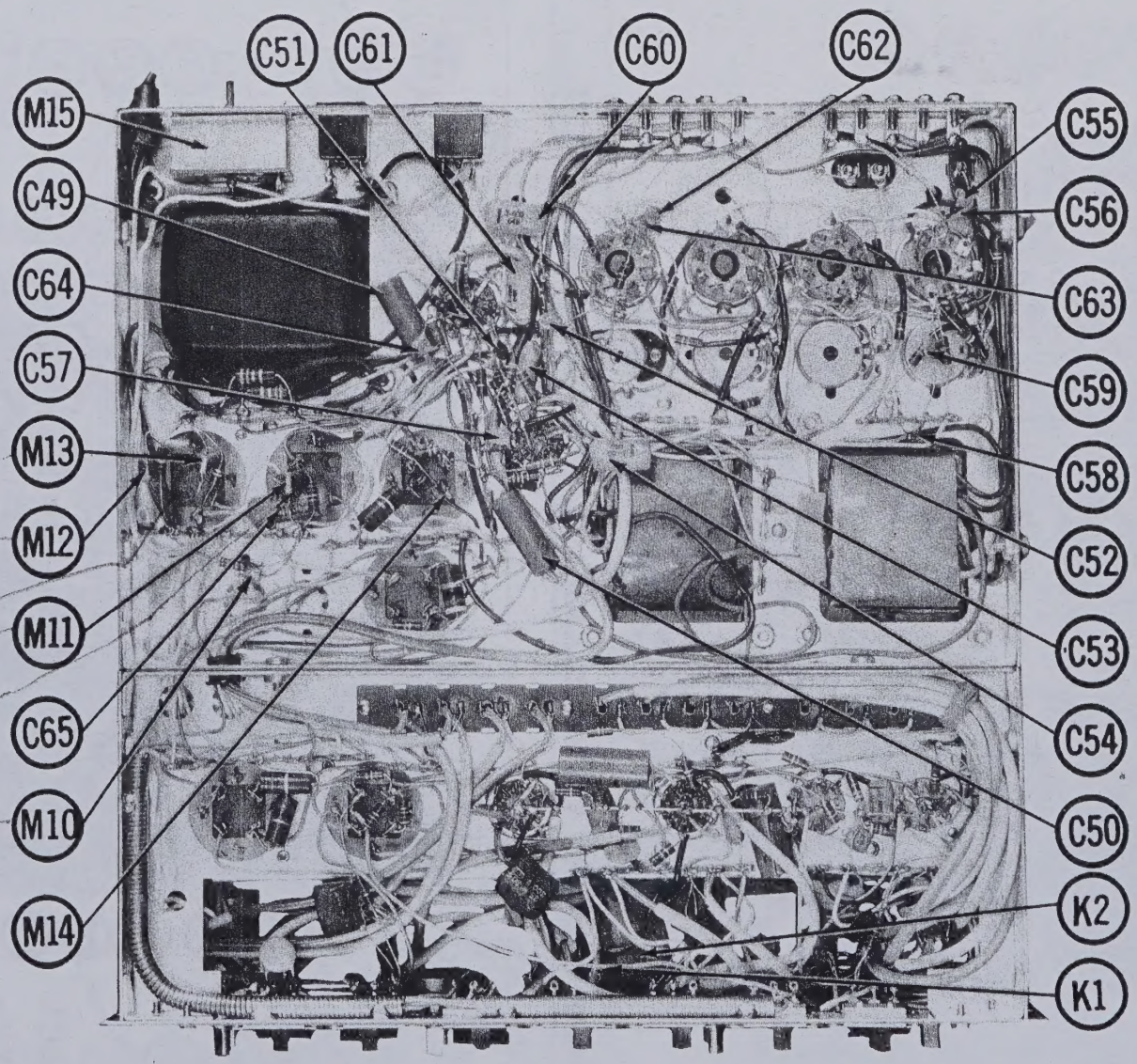
CHASSIS-TOP VIEW



CHASSIS BOTTOM VIEW-PREAMP, CAPACITOR & MISC. IDENT.



CHASSIS BOTTOM VIEW-PREAMP, RESISTOR IDENT.



CHASSIS BOTTOM VIEW-AMP, CAPACITOR & MISC. IDENT.

CHASSIS BOTTOM VIEW-AMP, RESISTOR IDENT.

STROMBERG-CARLSON MODELS
ASE-8, ASP-80, ASR-8, 80G

FOLDER 12

BIAS AND BALANCE ADJUSTMENT

To properly make these adjustments, the following equipment is required.

a. Two DC Milliammeters (0-100 ma).
b. Audio-oscillator, sine-wave.
c. Oscilloscope with linear sweep.
d. Resistive load, 8 or 16 ohms, 50 watts non-inductive.

Procedure:

1. Connect one lead of the load to the OUTPUT A LO terminal of the amplifier. Connect the other lead to 8 for 8 ohm load; or 16 for 16 ohm load.
2. With the power turned off, connect the milliammeters in the plate circuits of the Channel A output tubes. This may be accomplished by connecting across pins 3 and 4 of the tube sockets and unsoldering the jumper wire between pins 3 and 4.
3. Turn on the amplifier and allow 5 minute warm up. Adjust the Channel A Balance control so that the two milliammeters read the same.
4. Adjust the Bias control so that both meters read approximately 34ma.
5. Connect the Audio-oscillator to the TUNER AUX. A input of the amplifier. Set the Audio-oscillator for 100 cycles. Operate the controls as follows: PROGRAM SELECTOR to AUX, BASS and TREBLE to center of rotation, VOLUME fully clockwise, CHANNEL SELECTOR to STEREO, all slide switches to the left and MASTER GAIN CONTROL to 8.
6. Connect the scope across the output load and observe the waveform. Increase the output level of the Audio-oscillator until the sinewave begins to appear clipped or flattens out as in Fig. 1.
7. Adjust the Channel A BALANCE control until the clipping is symmetrical as in Fig. 2.
8. Remove the signal and check the milliammeters. If either meter reads more than 37ma, readjust the BIAS control so that the meter reads 37ma.
9. Disconnect the power and meters. Restore the jumpers on pins 3 and 4 of Channel A Output tube sockets.
10. Connect the meters in the plate circuit of the Channel B Output tubes as outlined in step 2.
11. Connect the resistive load and the scope to the OUTPUT B terminals as in step 1. Connect the power. Connect the Audio-oscillator to TUNER AUX B and set for 100 cycles.
12. Observe the waveform and adjust the output of the audio-oscillator until the sinewave just begins to clip. Adjust the Channel B BALANCE control until the clipping is symmetrical.
13. Remove the signal and check the meters for a maximum reading of 37ma. Readjust the Bias control if necessary so that the maximum reading does not exceed 37ma. on either meter.
14. Restore the jumpers on pins 3 and 4 of the channel B Output tube sockets.

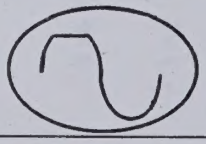
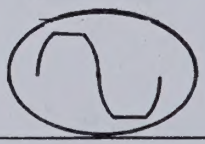
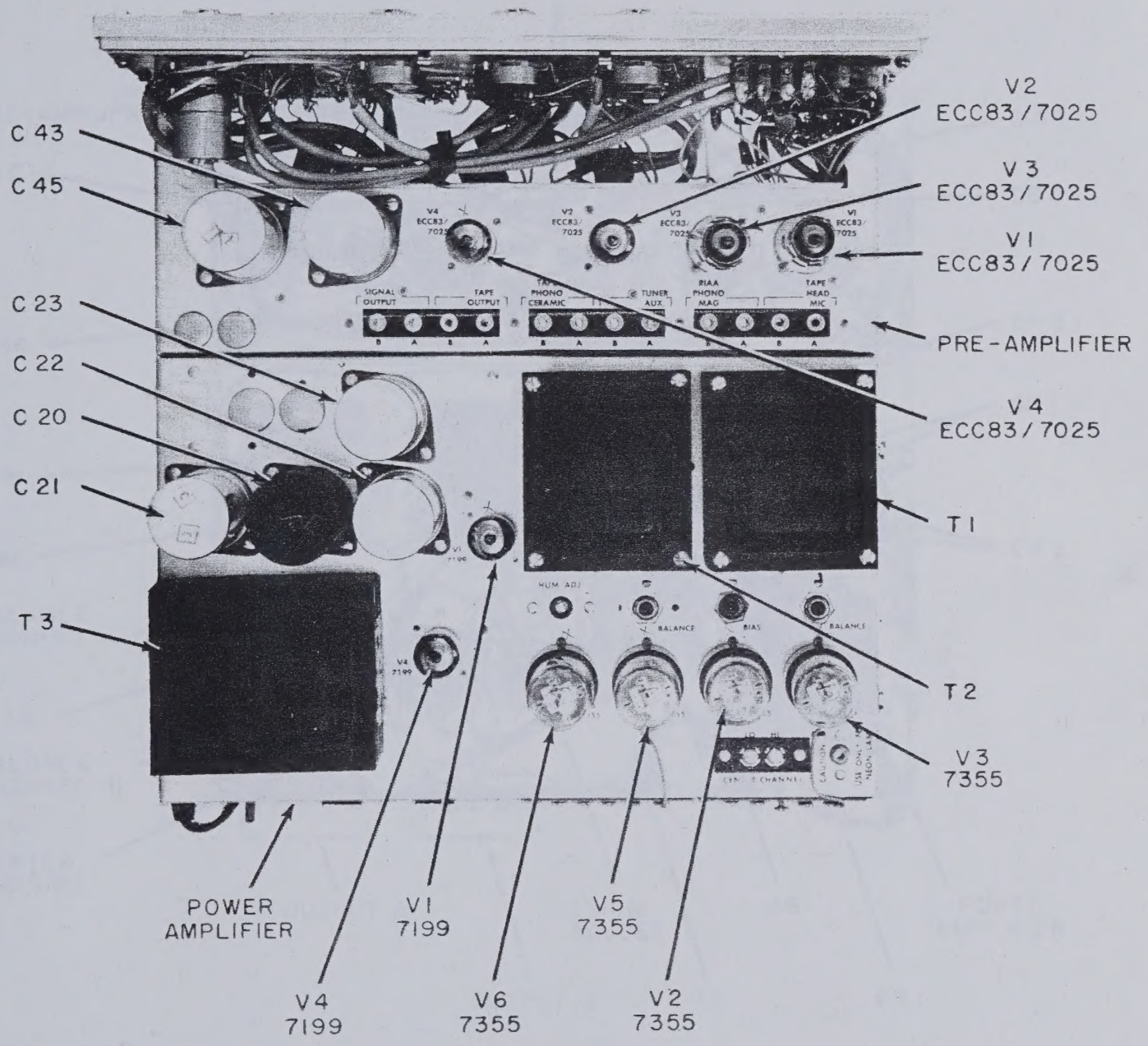
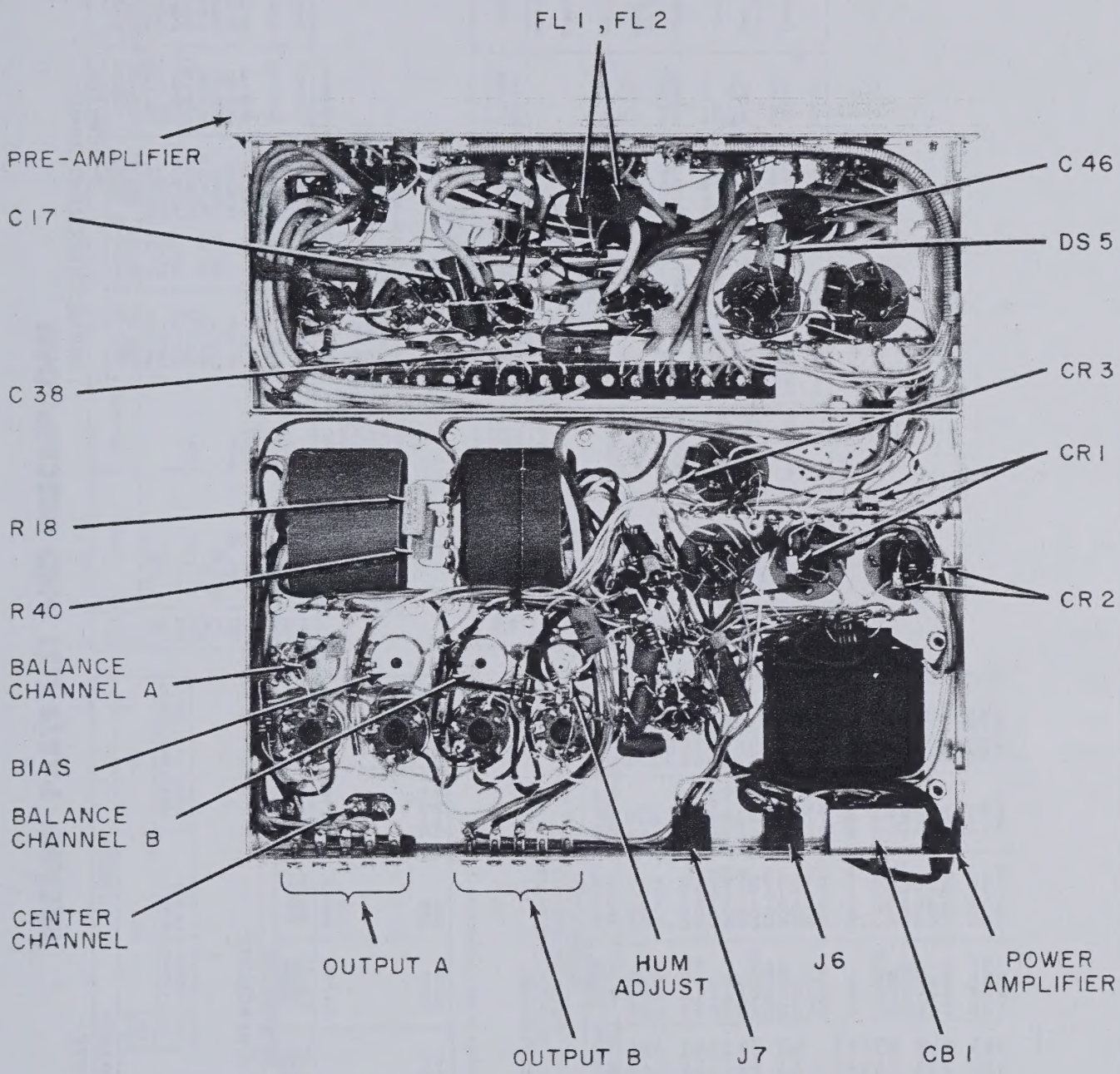
FIG. 1 

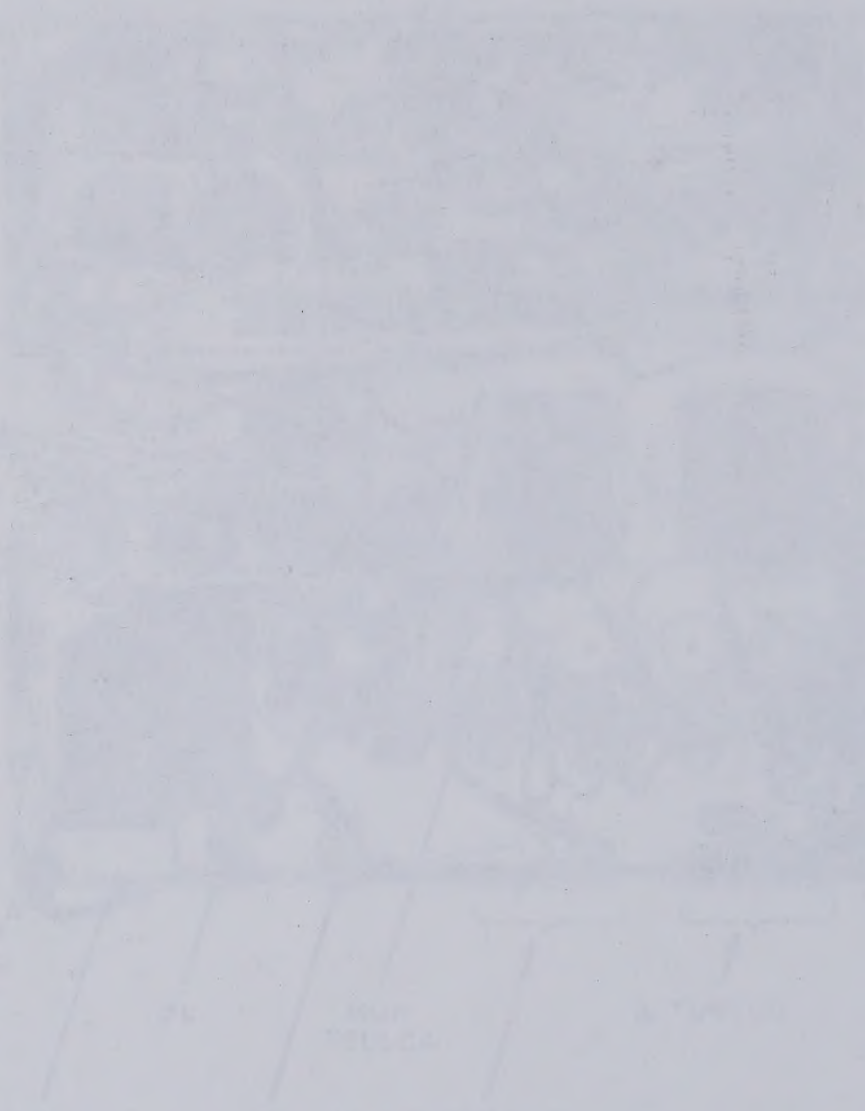
FIG. 2 



ASR-8-80 (TOP VIEW)



ASR-8·80 (BOTTOM VIEW)



PREAMP PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	TYPE (◆ GENERAL ELECTRIC ◆ RAYTHEON ◆ SYLVANIA ◆)
V1	Channel A Preamp.	ECC83/12AX7 (7025)*
V2	Channel A AF Amp.	ECC83/12AX7 (7025)*
V3	Channel B Preamp.	ECC83/12AX7 (7025)*
V4	Channel B AF Amp.	ECC83/12AX7 (7025)*

* Alternate

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA Stromberg-Carlson PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	▲20	450	111000-028	AFH3-36		XC4-49	FP376.5	TMQ-4616	
B	■20	450		PRS1735			TC75		
C	▲20	450							
D	20	450							
C2A	▲100	75	111000-081						TVLPS-3360*
B	■100	75							
C	▲10	75							
C3	50	6	111615-000	PRS1265	BBR50-6	QT1-15	TC29	TD-50-6	TVA-1100
C4	50	6	111615-000	PRS1265	BBR50-6	QT1-15	TC29	TD-50-6	TVA-1100

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C5	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C6	330		DI-330	DD-331	L10T33	CCD-331	B-333	10TS-T33
C7	.0015	Note 3	BPD-0015	DD-152	BYA10D15	CCD-152	B-215	5HK-D15
C8	100 N150	#552076-101				*		10TCP-T10
C9	.0022		BPD-0022	DD-222	BYA10D22	CCD-222	B-222	5HK-D22
C10	820		DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C11	.01 400V		P488N-01	D6-103	CUB4S1	4DP-1-103	GEM-411	4TM-S10
C12	.02 400V		P488N-02	DD-203	CUB4S2	4DP-2-203	GEM-412	4TM-S20
C13	.1 400V		P488N-1	DF-104	CUB4P1	4DP-1-103	GEM-401	4TM-P10
C14	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C15	.25 200V	Note 1	P288N-25		CUB2P25	2DP-4-254	GEM-2025	2TM-P25
C16	.0022		BPD-0022	DD-222	BYA10D22	CCD-222	B-222	5HK-D22
C17	220 10%		DI-220	DD-221	L10T22	CCD-221	GP322	10TS-T22
C18	.0047 10%	Note 4	DI-4700		PM6D47	CCD-472	JL-247	10TS-D47
C19	.0047 10%	Note 4	DI-4700		PM6D47	CCD-472	JL-247	10TS-D47
C20	47 N1500	#552076-470		TCL-47		*		
C21	.1 200V	Note 2	P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10
C22	47 N1500	#552076-470		TCL-47		*		
C23	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C24	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C25	.25 200V		P288N-25		CUB2P25	2DP-4-254	GEM-2025	2TM-P25
C26	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C27	330		DI-330	DD-331	L10T33	CCD-331	B-333	10TS-T33
C28	.0015	Note 3	BPD-0015	DD-152	BYA10D15	CCD-152	B-215	5HK-D15
C29	100 N150	#552076-101				*		10TCP-T10
C30	.0022		BPD-0022	DD-222	BYA10D22	CCD-222	B-222	5HK-D22
C31	820		DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C32	.01 400V		P488N-01	D6-103	CUB4S1	4DP-1-103	GEM-411	4TM-S10

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C33	.02 400V		P488N-02	DD-203	CUB4S2	4DP-2-203	GEM-412	4TM-S20
C34	.1 400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C35	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C36	.25 200V	Note 1	P288N-25		CUB2P25	2DP-4-254	GEM-2025	2TM-P25
C37	.0022		BPD-0022	DD-222	BYA10D22	CCD-222	B-222	5HK-D22
C38	220 10%		DI-220	DD-221	L10T22	CCD-221	GP322	10TS-T22
C39	.0047 10%	Note 4	DI-4700		PM6D47	CCD-472	JL-247	10TS-D47
C40	.0047 10%	Note 4	DI-4700		PM6D47	CCD-472	JL-247	10TS-D47
C41	47 N1500	#552076-470		TCL-47		*		
C42	.1 200V	Note 2	P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10
C43	47 N1500	#552076-470		TCL-47		*		
C44	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.
\# Stromberg-Carlson Part Number.
Note 1. Some versions of Model ASR-8.80G may use .22mfd in this application.
Note 2. Some versions of Model ASR-8.80G may use 400V unit in this application.
Note 3. Not used in later versions of Model ASR-8.80G.
Note 4. Value changes to .01mfd when cable is used to connect the chassis.

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA Stromberg-Carlson PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1meg	½	145000-023					Master Gain, Channel A
	250K Tap							
B	1meg	½						Master Gain, Channel B
	250K Tap							
C	Switch							
R2A	1meg	½	145000-072	B-70	A47-1meg-Z	Q13-137	U53	Volume, Channel A
B	Shaft			Not Req.	FS-3	Not Req.	Not Req.	
R3A	1meg	½	145000-090	BT-71	A47F5-1meg	Q19-137X	UT-443	Bass, Channel A
	500K Tap							Not Used
B	Shaft			Not Req.	FS-3	Not Req.	Not Req.	
R4A	1meg	½	145000-090	BT-71	A47F5-1meg	Q19-137X	UT-443	Treble, Channel A
	500K Tap							
B	Shaft			Not Req.	FS-3	Not Req.	Not Req.	
R5A	1meg	½	145000-072	B-70	A47-1meg-Z	Q13-137	U53	Volume, Channel B
B	Shaft			Not Req.	FS-3	Not Req.	Not Req.	
R6A	1meg	½	145000-090	BT-71	A47F5-1meg	Q19-137X	UT-443	Bass, Channel B
	500K Tap							Not Used
B	Shaft			Not Req.	FS-3	Not Req.	Not Req.	
R7A	1meg	½	145000-090	BT-71	A47F5-1meg	Q19-137X	UT-443	Treble, Channel B
	500K Tap							
B	Shaft			Not Req.	FS-3	Not Req.	Not Req.	

PREAMP PARTS LIST (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS
R8	2.2meg 5%			
R9	47K 5%			
R10	91K 5%			
R11	3300Ω 5%			
R12	3.3meg 5%			
R13	270K			
R14	100K 5%			
R15	56K 5%			
R16	220K 5%			
R17	27K			
R18	15K			
R19	1000Ω 5%			
R20	82K			
R21	82K			
R22	470K			
R23	150K			
R24	2200Ω			
R25	47K			
R26	2.2meg 5%			
R27	47K 5%			
R28	91K 5%			
R29	3300Ω 5%			

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS
R30	3.3meg 5%			
R31	270K			
R32	100K 5%			
R33	56K 5%			
R34	220K 5%			
R35	56K			
R36	27K			
R37	15K			
R38	1000Ω 5%			
R39	82K			
R40	470K			
R41	82K			
R42	150K			
R43	2200Ω			
R44	47K			
R45	22meg			
R46	330K			
R47	56K			
R48	47K			
R49	47K			
R50	56Ω 2W			
R51	56Ω 2W			

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	Stromberg-Carlson PART No.	REPLACEMENT DATA
K1	Rumble Filter Comp.	.01mfd, .01mfd, .01mfd, 354K, 1.4meg, 1.4meg	179000-034	Centralab PC-402
K2	Rumble Filter Comp.	.01mfd, .01mfd, .01mfd, 354K, 1.4meg, 1.4meg	179000-034	Centralab PC-402

MISCELLANEOUS

ITEM No.	PART NAME	Stromberg-Carlson PART No.	NOTES
M1	Switch	158000-152	Function Selector (Rotary Wafer Type)
M2	Switch	158000-151	Mode Selector (Rotary Wafer Type)
M3	Switch	158000-058	Equalization (DPDT, Slide Type)
M4	Switch	158000-058	Rumble Filter (DPDT, Slide Type)
M5	Switch	158000-058	Scratch Filter (DPDT, Slide Type)
M6	Switch	158000-058	Loudness Contour (DPDT, Slide Type)
M7	Switch	158000-058	Balance Signal (DPDT, Slide Type)
M8	Switch	158000-058	Phase (DPDT, Slide Type)
M9	Switch	158000-058	Center Channel (DPDT, Slide Type)

WIRING DATA

General-use Unshielded Hook-up Wire .....Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

AMP PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
	• GENERAL ELECTRIC •			• RAYTHEON • SYLVANIA •	
V5	Channel A AF Amp. - Phase Inverter	7199	V8	Channel B AF Amp. - Phase Inverter	7199
V6	Channel A Output	7355	V9	Channel B Output	7355
V7	Channel A Output	7355	V10	Channel B Output	7355

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	Stromberg-Carlson PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C45	120	300	111000-083	AFHS1-36-05		XC1-21	FP149, TC78		
C46	120	300	111000-082	AFHS1-36-05		XC1-21	FP149, TC78		
C47A	20	450	111000-028	AFH3-36		XC4-49	FP376.5	TMQ-4616	
B	▲20	450		PRS1735			TC75		
C	▲20	450							
D	▲20	450							
C48A	▲100	75	111000-081						TVLPS-3360*
B	▲100	75							
C	▲10	75							
C49	4	150	111000-050	PRS1400	BBR4-150	QT1-2	TT150X4	TD-4-150	TVA-1402
C50	4	150	111000-050	PRS1400	BBR4-150	QT1-2	TT150X4	TD-4-150	TVA-1402

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C51	10		DI-10	DD-100	L10Q1	CCD-100	GP410	10TS-Q10
C52	100 N150	#552076-101				*		10TCP-T10
C53	.1 400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C54	.1 400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C55	47 N1500	Note 1		TCL-47		*		
C56	47 N1500	Note 2		TCL-47		*		
C57	470		DI-470	DD-471	BYA10T47	CCD-471	B-347	10TS-T47
C58	10		DI-10	DD-100	L10Q1	CCD-100	GP410	10TS-Q10
C59	100 N150	#552076-101				*		10TCP-T10
C60	.1 400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C61	.1 400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C62	47 N1500	Note 1		TCL-47		*		
C63	47 N1500	Note 2		TCL-47		*		
C64	470		DI-470	DD-471	BYA10T47	CCD-471	B-347	10TS-T47
C65	.01 600V		P688N-01	D6-103	CUB6S1	6DP-2-103	GEM-611	6TM-S10

Note 1. Not used in some versions.
Note 2. Some versions use 82mmf in this application (Part No. 557076-820).
* Not normally in distributor's stock. Available thru distributor on order to manufacturer.
# Stromberg-Carlson Part Number.

AMP PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	Stromberg-Carlson PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R52A	100Ω	2(WW)	173853-000	WN-101	A43-100	W11-084	FLI00P	Hum Balance
B	Shaft			Not Req.	FKS-1/4	SK5	Not Req.	
R53A	50K	½	145000-096	AB-31	A47-50K-S	Q11-123	SU-35	Balance, Channel B
B	Shaft			AK-1	FKS-1/4	Not Req.	Not Req.	
R54A	5000Ω	½	145000-095	AB-10	A47-5000-S	Q11-114	SU-14	Bias
B	Shaft			AK-1	FKS-1/4	Not Req.	Not Req.	
R55A	50K	½	145000-096	AB-31	A47-50K-S	Q11-123	SU-35	Balance, Channel A
B	Shaft			AK-1	FKS-1/4	Not Req.	Not Req.	

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS
R56	470K			
R57	330K			
R58	1.2meg			
R59	1000Ω 5%			
R60	47K 5%			
R61	47K 5%			
R62	1000Ω			
R63	100K			
R64	150K			
R65	1000Ω			
R66	15K			
R67	100K			
R68	150K			
R69	9100Ω 5%			
R70	470K			
R71	330K			
R72	1.2meg			
R73	1000Ω 5%			
R74	47K 5%			
R75	47K 5%			
R76	1000Ω			
R77	100K			
R78	150K			

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS
R79	1000Ω			
R80	15K			
R81	100K			
R82	150K			
R83	9100Ω 5%			
R84	5.6Ω 5W	PW5-5.6	5W-SQ-5.6	
R85	6000Ω 5W	PW5-6000	7W-SQ-6000	
R86	10K			
R87	10K			
R88	100K 2W 5%			
R89	470K			
R90	15K			
R91	1.2meg			
R92	10K			
R93	47Ω 2W			
R94	3.3Ω 1W			Note 1
R95	3.3Ω 1W			Note 1
R96	220K			
R97	220K			
R98	220K			
R99	220K			
R100	220K			

Note 1. Not used in later versions of Model ASR-8, 80G.

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	Stromberg-Carlson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	117V Ⓐ 1.25A	175V Ⓐ .560A AC	6.3V Ⓐ 3.8A	161000-225					
	SEC. 3	SEC. 4	SEC. 5						
	55V Ⓐ .150A DC								

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	Stromberg-Carlson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	6500Ω CT	16Ω Tap Ⓐ 8Ω, 4Ω	161000-172					
T3	6500Ω CT	16Ω Tap Ⓐ 8Ω, 4Ω	161000-172					

POWER RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA			NOTES
	CURRENT (Measured)	Stromberg-Carlson PART No.	RCA PART No.	SARKES TARZIAN PART No.	
M10	.140A	162000-064	1N1764	40H	
M11	.140A	162000-064	1N1764	40H	
M12	.140A	162000-064	1N1764	40H	
M13	.140A	162000-064	1N1764	40H	
M14	.15A	162000-063	1N1763	40H	

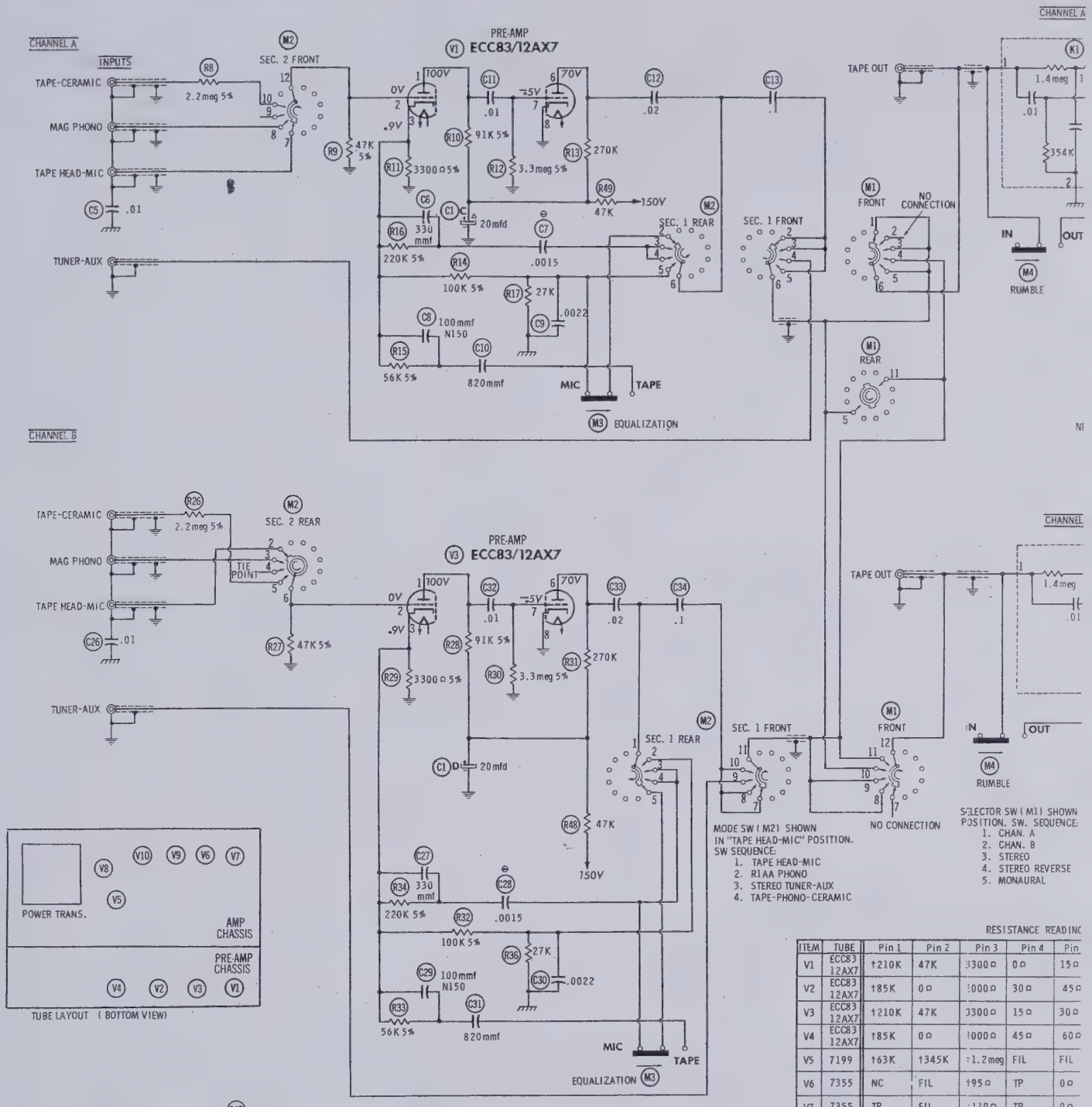
MISCELLANEOUS

ITEM No.	PART NAME	Stromberg-Carlson PART No.	NOTES
M15	Circuit Breaker	128000-040	

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

Power Cord ..... Use BELDEN No. 1765-B (6 Ft. Length)
1725-K (7½ Ft. Length)



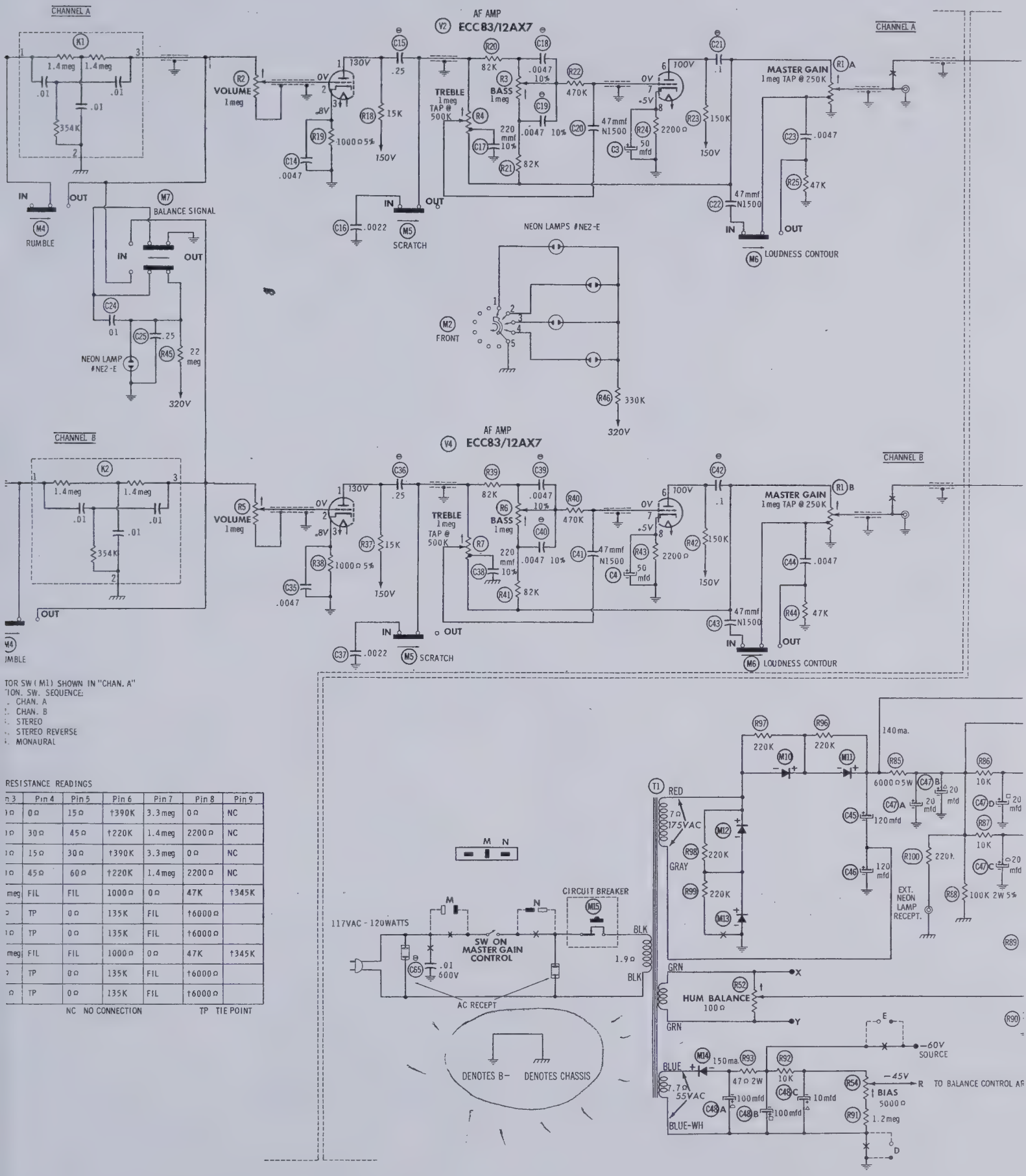
RESISTANCE READING

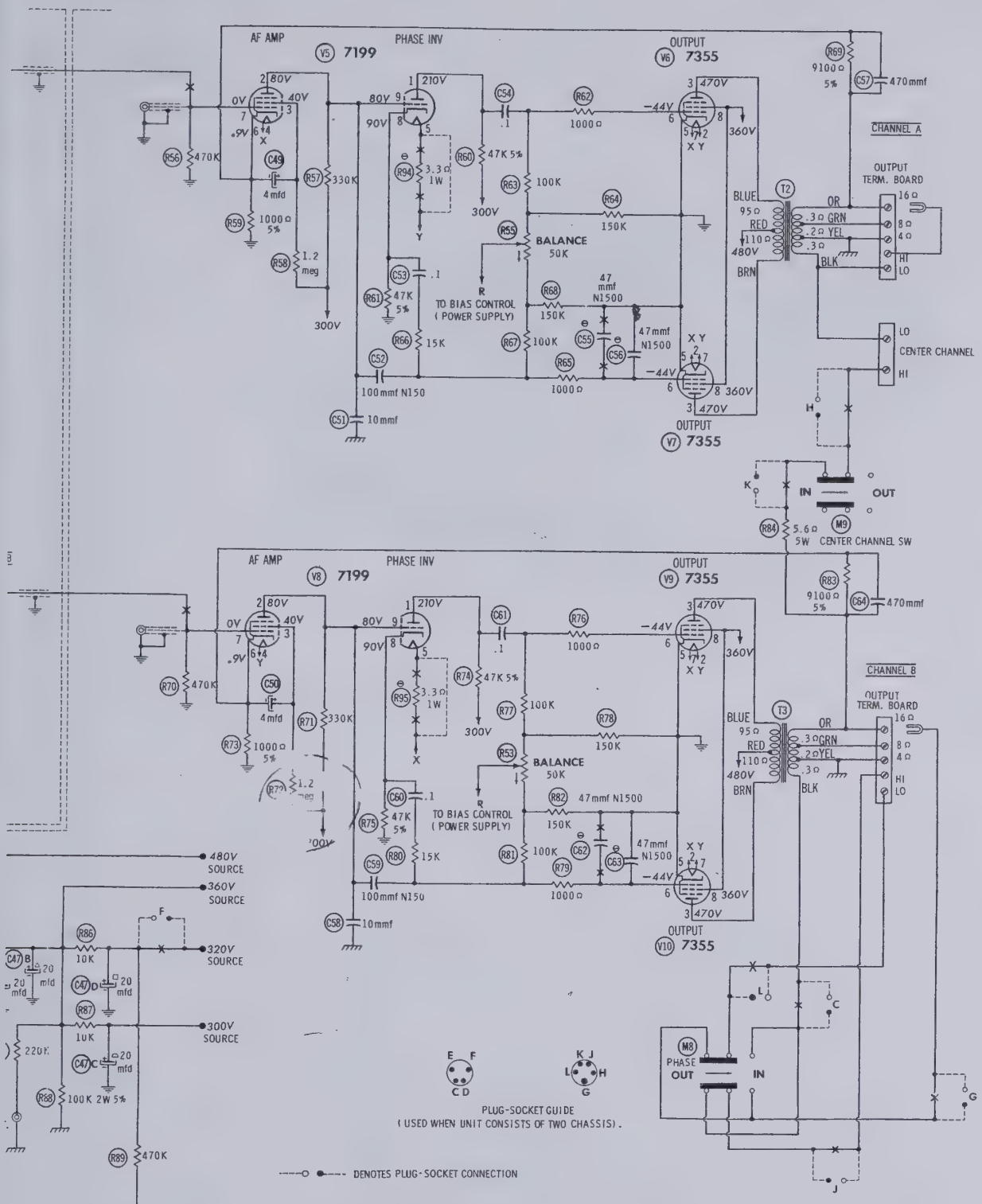
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin
V1	ECC83 12AX7	†210K	47K	3300Ω	0Ω	15Ω
V2	ECC83 12AX7	†85K	0Ω	1000Ω	30Ω	45Ω
V3	ECC83 12AX7	†210K	47K	3300Ω	15Ω	30Ω
V4	ECC83 12AX7	†85K	0Ω	1000Ω	45Ω	60Ω
V5	7199	†63K	†345K	†1.2meg	FIL	FIL
V6	7355	NC	FIL	†95Ω	TP	0Ω
V7	7355	TP	FIL	†110Ω	TP	0Ω
V8	7199	†63K	†345K	†1.2meg	FIL	FIL
V9	7355	NC	FIL	95Ω	TP	0Ω
V10	7355	TP	FIL	†110Ω	TP	0Ω

† MEASURED FROM OUTPUT OF M11. NC

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance of component values makes possible a variation of ±15% in voltage and resistance readings.
6. All controls at minimum, proper output load connected.

A PHOTOFACT STANDARD NOTATION SCHEMATIC


CHANNEL A
AF AMP
V2 ECC83/12AX7
CHANNEL A
K1
1.4meg
1.4meg
.01
.01
.01
354K
R2 VOLUME 1meg
130V
0V
.8V
C15 .25
R18 15K
R19 1000Ω 5%
150V
C14 .0047
R20 82K
C18 .0047 10%
R3 BASS 1meg
C19 .0047 10%
TREBLE 1meg TAP @ 500K
R4
220 mmf 10%
C17
R21 82K
R22 470K
C20 47mmf N1500
C3 .05 mfd
R24 2200Ω
0V
-.5V
100V
C21 .1
R23 150K
150V
MASTER GAIN 1meg TAP @ 250K
R1 A
C23 .0047
R25 47K
C22 47mmf N1500
IN
OUT
M6 LOUDNESS CONTOUR
IN
OUT
C16 .0022
M5 SCRATCH
IN
OUT
M4 RUMBLE
M7 BALANCE SIGNAL
IN
OUT
C24 .01
C29 .25
R45 22 meg
NEON LAMP #NE2-E
320V
NEON LAMPS #NE2-E
M2 FRONT
R46 330K
320V
CHANNEL B
AF AMP
V4 ECC83/12AX7
CHANNEL B
K2
1.4meg
1.4meg
.01
.01
.01
354K
OUT
M4 RUMBLE
R5 VOLUME 1meg
130V
0V
.8V
C36 .25
R37 15K
R38 1000Ω 5%
150V
C35 .0047
R39 82K
C39 .0047 10%
R6 BASS 1meg
C40
TREBLE 1meg TAP @ 500K
R7
220 mmf 10%
C38
R41 82K
R40 470K
C41 47mmf N1500
C4 .05 mfd
R43 2200Ω
0V
-.5V
100V
C42 .1
R42 150K
150V
MASTER GAIN 1meg TAP @ 250K
R1 B
C44 .0047
R44 47K
C43 47mmf N1500
IN
OUT
M6 LOUDNESS CONTOUR
IN
OUT
C37 .0022
M5 SCRATCH
TOR SW (M1) SHOWN IN "CHAN. A"
TION. SW. SEQUENCE:
. CHAN. A
. CHAN. B
. STEREO
. STEREO REVERSE
. MONAURAL
RESISTANCE READINGS
n 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 | Pin 8 | Pin 9
0Ω | 0Ω | 15Ω | †390K | 3.3meg | 0Ω | NC
0Ω | 30Ω | 45Ω | †220K | 1.4meg | 2200Ω | NC
0Ω | 15Ω | 30Ω | †390K | 3.3meg | 0Ω | NC
0Ω | 45Ω | 60Ω | †220K | 1.4meg | 2200Ω | NC
meg | FIL | FIL | 1000Ω | 0Ω | 47K | †345K
Ω | TP | 0Ω | 135K | FIL | †6000Ω |
0Ω | TP | 0Ω | 135K | FIL | †6000Ω |
meg | FIL | FIL | 1000Ω | 0Ω | 47K | †345K
Ω | TP | 0Ω | 135K | FIL | †6000Ω |
Ω | TP | 0Ω | 135K | FIL | †6000Ω |
NC NO CONNECTION
TP TIE POINT
M N
CIRCUIT BREAKER
M15
117VAC - 120WATTS
M N
SW ON MASTER GAIN CONTROL
C65 .01 600V
AC RECEPT
DENOTES B-
DENOTES CHASSIS
T1
RED
7Ω 375VAC
GRAY
BLK
1.9Ω
BLK
GRN
GRN
HUM BALANCE 100Ω
X
Y
E
-60V SOURCE
BLUE
7Ω 55VAC
BLUE-WH
M14 150ma.
R93 47Ω 2W
R92 10K
C48C 10mfd
C48A 100mfd
C48B 100mfd
R54
-45V BIAS 5000Ω
R91 1.2meg
R
TO BALANCE CONTROL AR
D
R97 220K
R96 220K
M10
M11
140ma.
R85 6000Ω 5W
C47B 20 mfd
C47A 20 mfd
C45 120mfd
R86 10K
C47D 20 mfd
R87 10K
C47C 20 mfd
R100 220K
R68 100K 2W 5%
EXT. NEON LAMP RECEPT.
R89
R98 220K
R99 220K
M12
M13
C46 120 mfd
R90

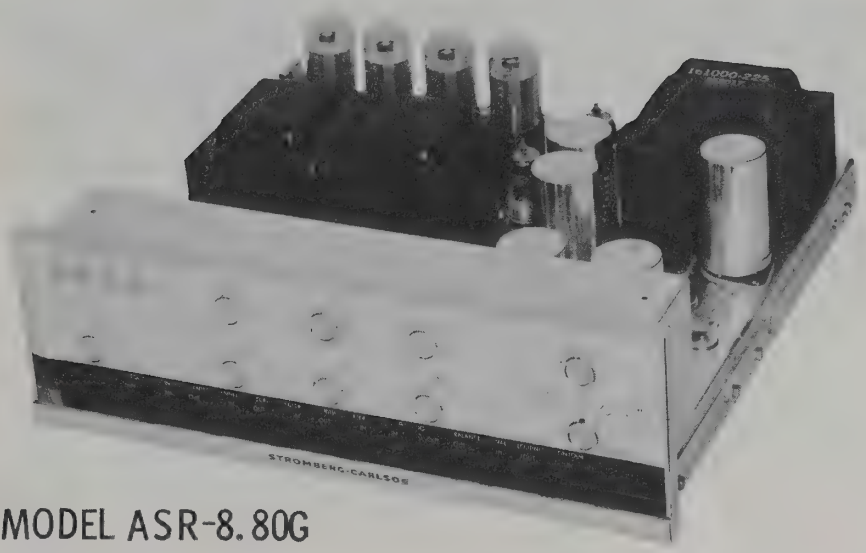


STROMBERG-CARLSON MODELS
ASE-8, ASP-80, ASR-8.80G

PHOTOFACT® Folder

STROMBERG-CARLSON MODELS ASE-8, ASP-80, ASR-8.80G

STROMBERG-CARLSON MODELS
ASE-8, ASP-80, ASR-8.80G



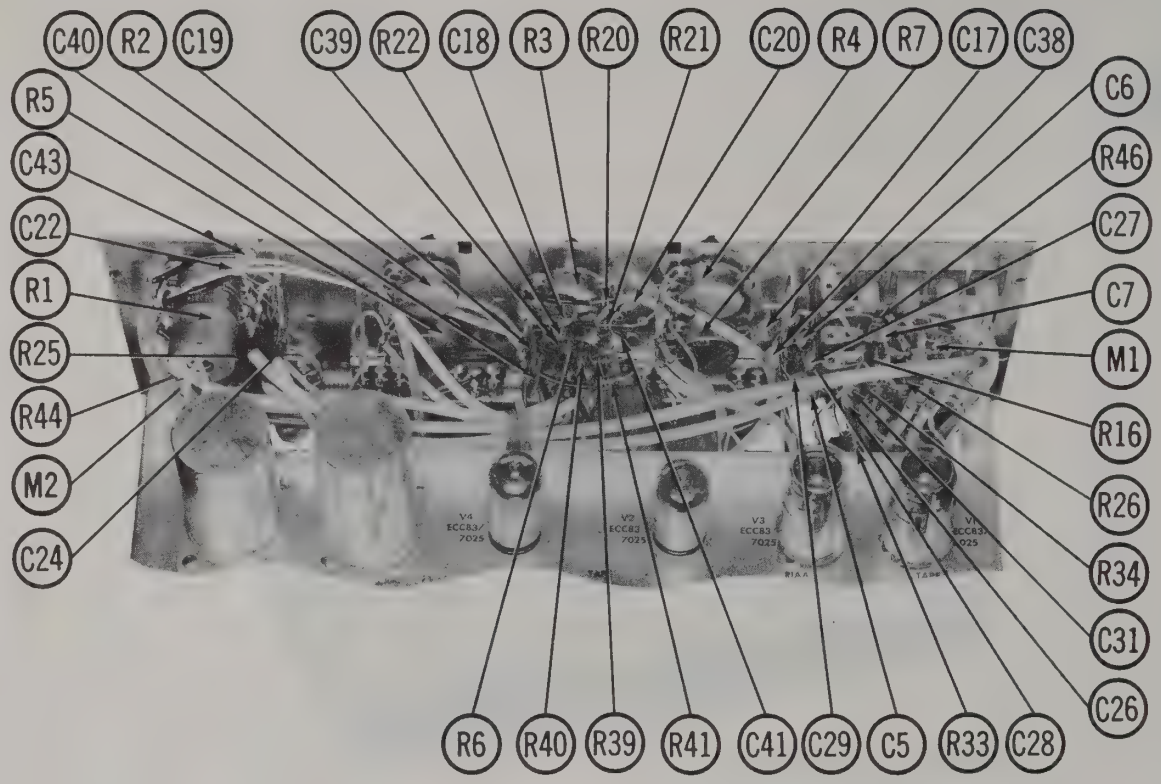
MODEL ASR-8.80G

STROMBERG-CARLSON MODELS
ASE-8, ASP-80, ASR-8.80G

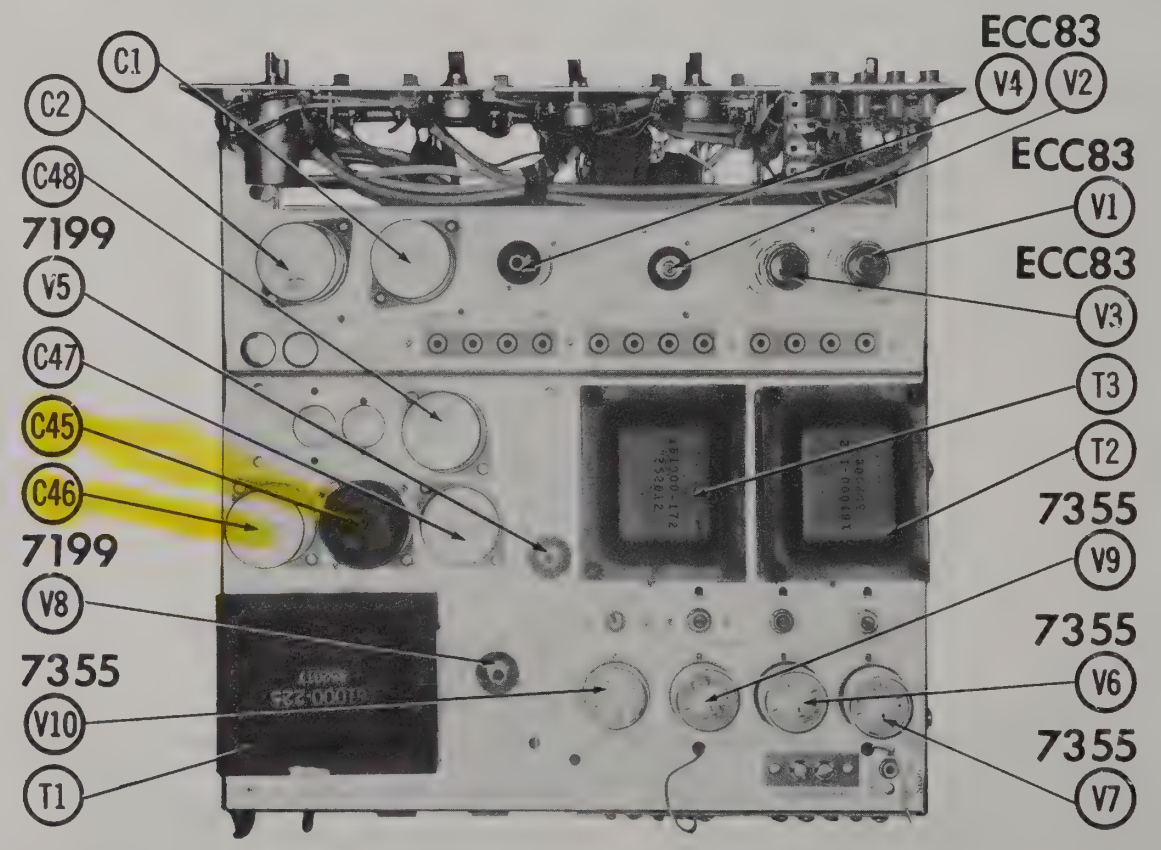
TRADE NAME	Stromberg-Carlson Model ASE-8 (Preamplifier), ASP-80 (Amplifier), ASR-8.80G (Combined Preamplifier and Amplifier)
MANUFACTURER	Stromberg-Carlson Co., A Div. of General Dynamics Corp., Commercial Products Div., 1400 N. Goodman Street, Rochester 9, N. Y.
TYPE SET	AC Operated 4 Tube Stereo Preamplifier and 6 Tube Stereo Amplifier
POWER SUPPLY	110 – 120 Volts AC, 60 Cycles RATING 120 Watts, 1.25 Amp. @ 117 Volts AC

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

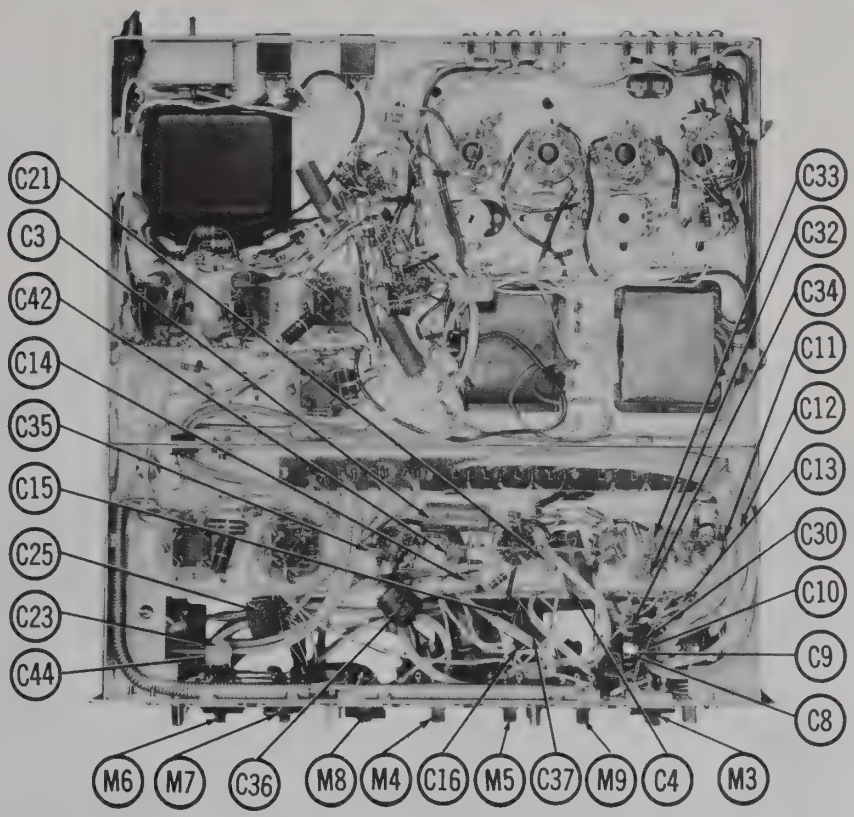
SET 557 FOLDER 12



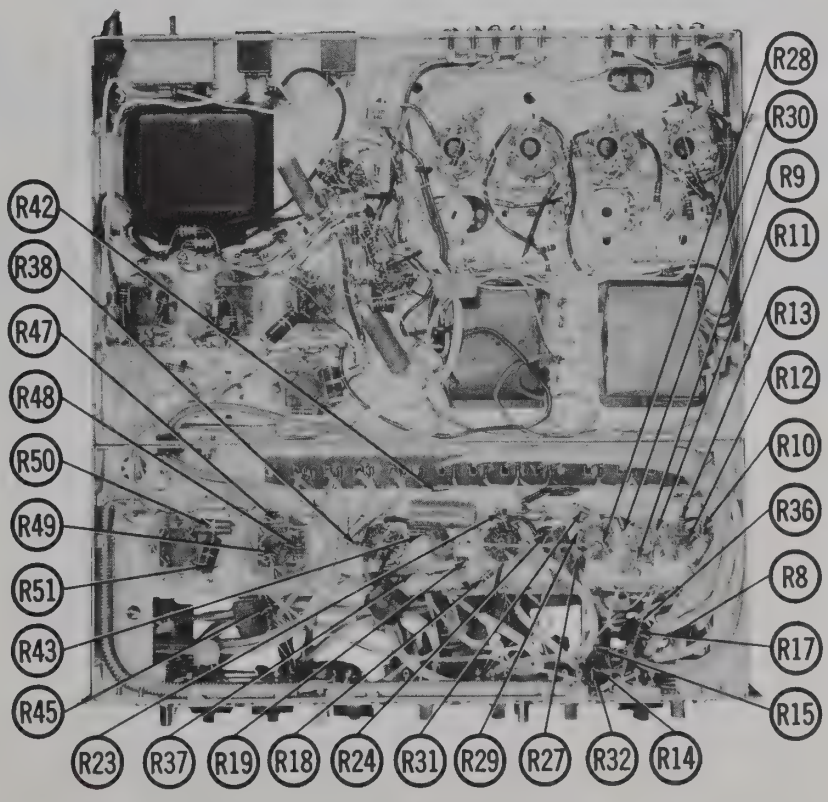
CONTROL PANEL-REAR VIEW



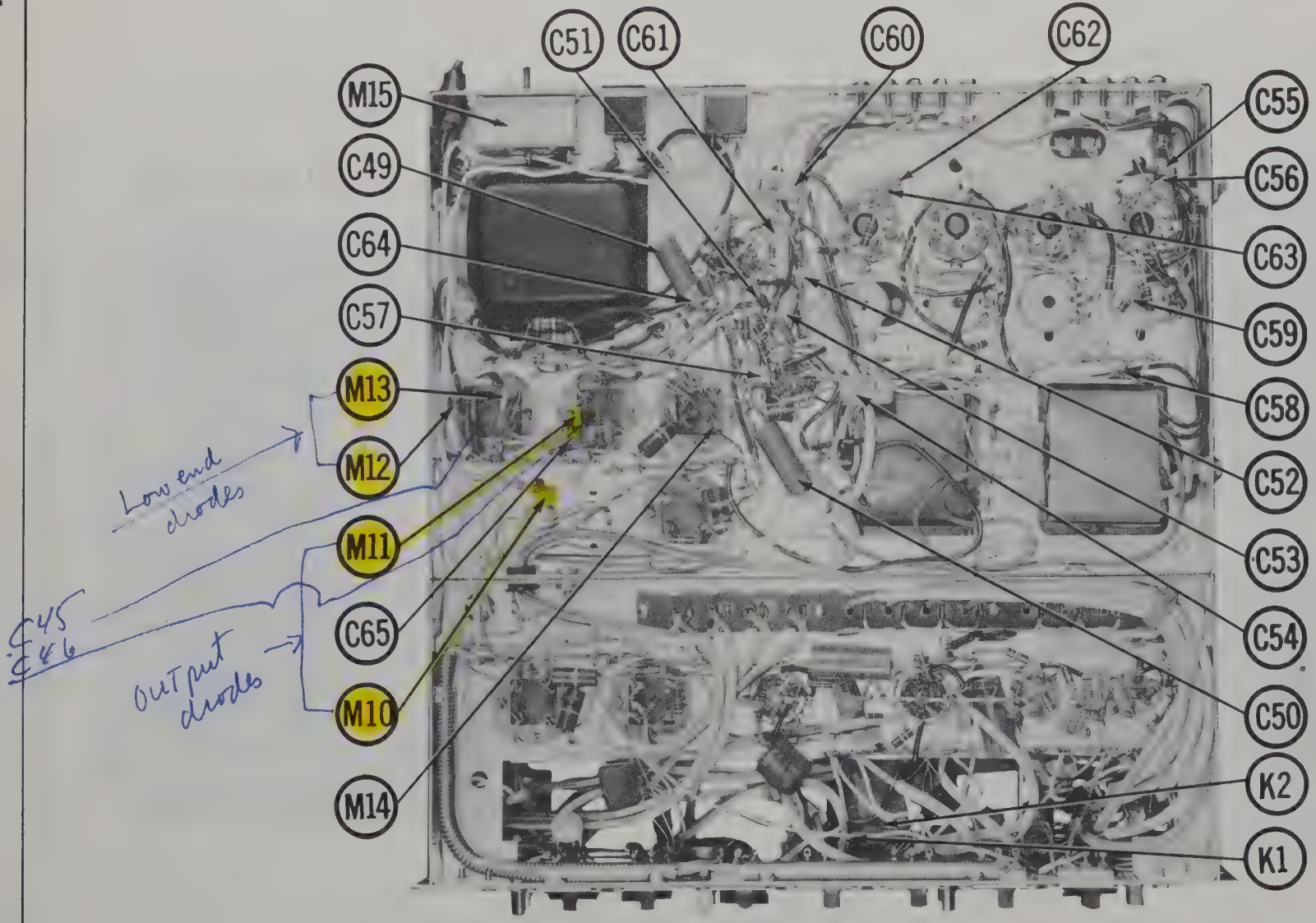
CHASSIS-TOP VIEW



CHASSIS BOTTOM VIEW-PREAMP, CAPACITOR & MISC. IDENT.



CHASSIS BOTTOM VIEW-PREAMP, RESISTOR IDENT.



CHASSIS BOTTOM VIEW-AMP, CAPACITOR & MISC. IDENT.

AMP PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	Stromberg-Carlson PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R52A	100Ω	2(WW)	173853-000	WN-101	A43-100	W11-084	FL100P	Hum Balance
B	Shaft			Not Req.	FKS-1/4	SK5	Not Req.	
R53A	50K	½	145000-096	AB-31	A47-50K-S	Q11-123	SU-35	Balance, Channel B
B	Shaft			AK-1	FKS-1/4	Not Req.	Not Req.	
R54A	5000Ω	½	145000-095	AB-10	A47-5000-S	Q11-114	SU-14	Bias
B	Shaft			AK-1	FKS-1/4	Not Req.	Not Req.	
R55A	50K	½	145000-096	AB-31	A47-50K-S	Q11-123	SU-35	Balance, Channel A
B	Shaft			AK-1	FKS-1/4	Not Req.	Not Req.	

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R56	470K				R79	1000Ω			
R57	330K				R80	15K			
R58	1.2meg				R81	100K			
R59	1000Ω 5%				R82	150K			
R60	47K 5%				R83	9100Ω 5%			
R61	47K 5%				R84	5.6Ω 5W	PW5-5.6	5W-SQ-5.6	
R62	1000Ω				R85	6000Ω 5W	PW5-6000	7W-SQ-6000	
R63	100K				R86	10K			
R64	150K				R87	10K			
R65	1000Ω				R88	100K 2W 5%			
R66	15K				R89	470K			
R67	100K				R90	15K			
R68	150K				R91	1.2meg			
R69	9100Ω 5%				R92	10K			
R70	470K				R93	47Ω 2W			
R71	330K				R94	3.3Ω 1W			Note 1
R72	1.2meg				R95	3.3Ω 1W			Note 1
R73	1000Ω 5%				R96	220K			
R74	47K 5%				R97	220K			
R75	47K 5%				R98	220K			
R76	1000Ω				R99	220K			
R77	100K				R100	220K			
R78	150K								

Note 1. Not used in later versions of Model ASR-8.80G.

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	Stromberg-Carlson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	117V Ⓐ 1.25A	175V Ⓐ .560A AC	6.3V Ⓐ 3.8A	161000-225					
	SEC. 3	SEC. 4	SEC. 5						
	55V Ⓐ .150A DC								

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	Stromberg-Carlson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	6500Ω CT	16Ω Tap Ⓐ 8Ω, 4Ω	161000-172					
T3	6500Ω CT	16Ω Tap Ⓐ 8Ω, 4Ω	161000-172					

POWER RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA			NOTES
	CURRENT (Measured)	Stromberg-Carlson PART No.	RCA PART No.	SARKES TARZIAN PART No.	
M10	.140A	162000-064	1N1764	40H	
M11	.140A	162000-064	1N1764	40H	
M12	.140A	162000-064	1N1764	40H	
M13	.140A	162000-064	1N1764	40H	
M14	.15A	162000-063	1N1763	40H	

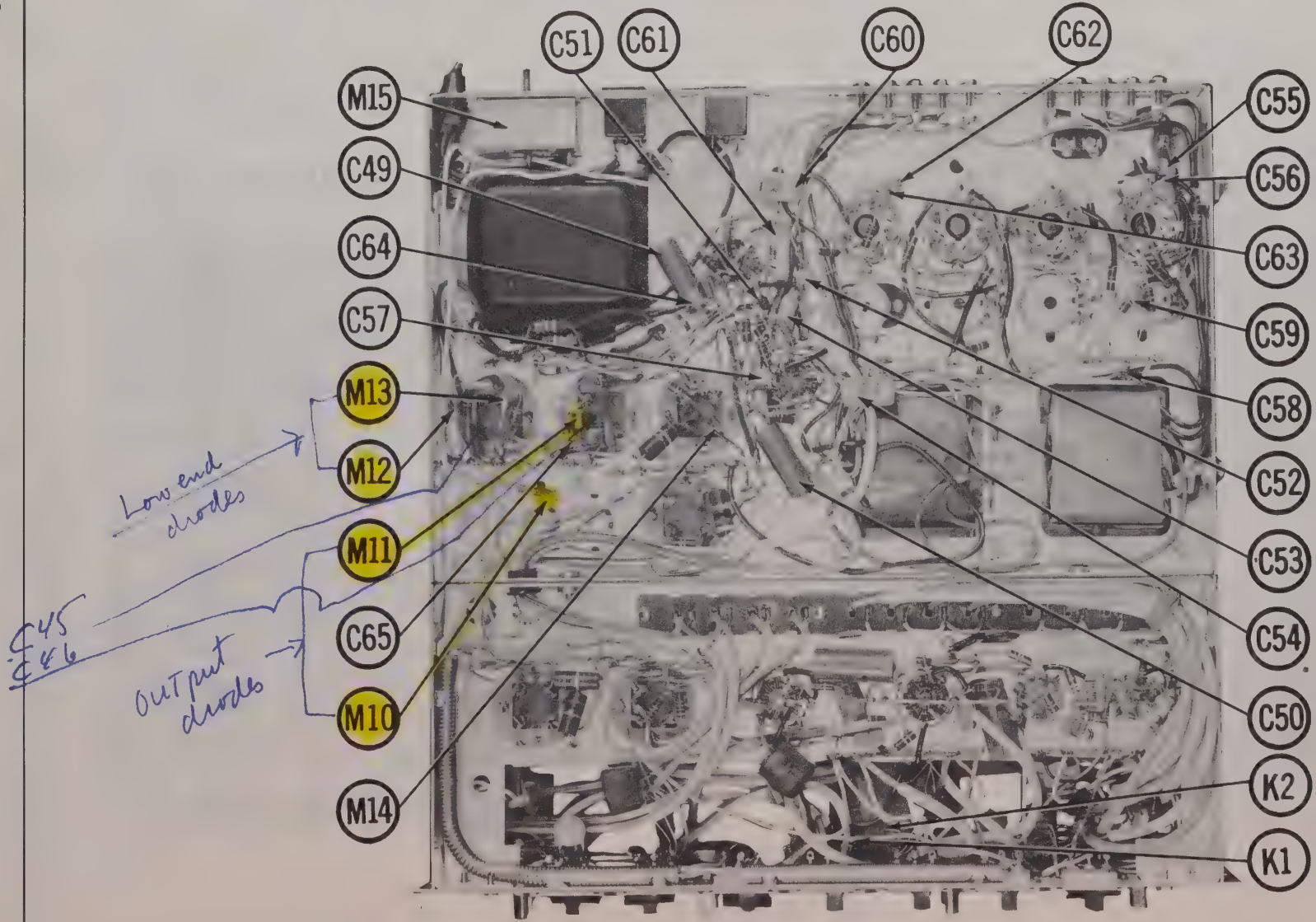
MISCELLANEOUS

ITEM No.	PART NAME	Stromberg-Carlson PART No.	NOTES
M15	Circuit Breaker	128000-040	

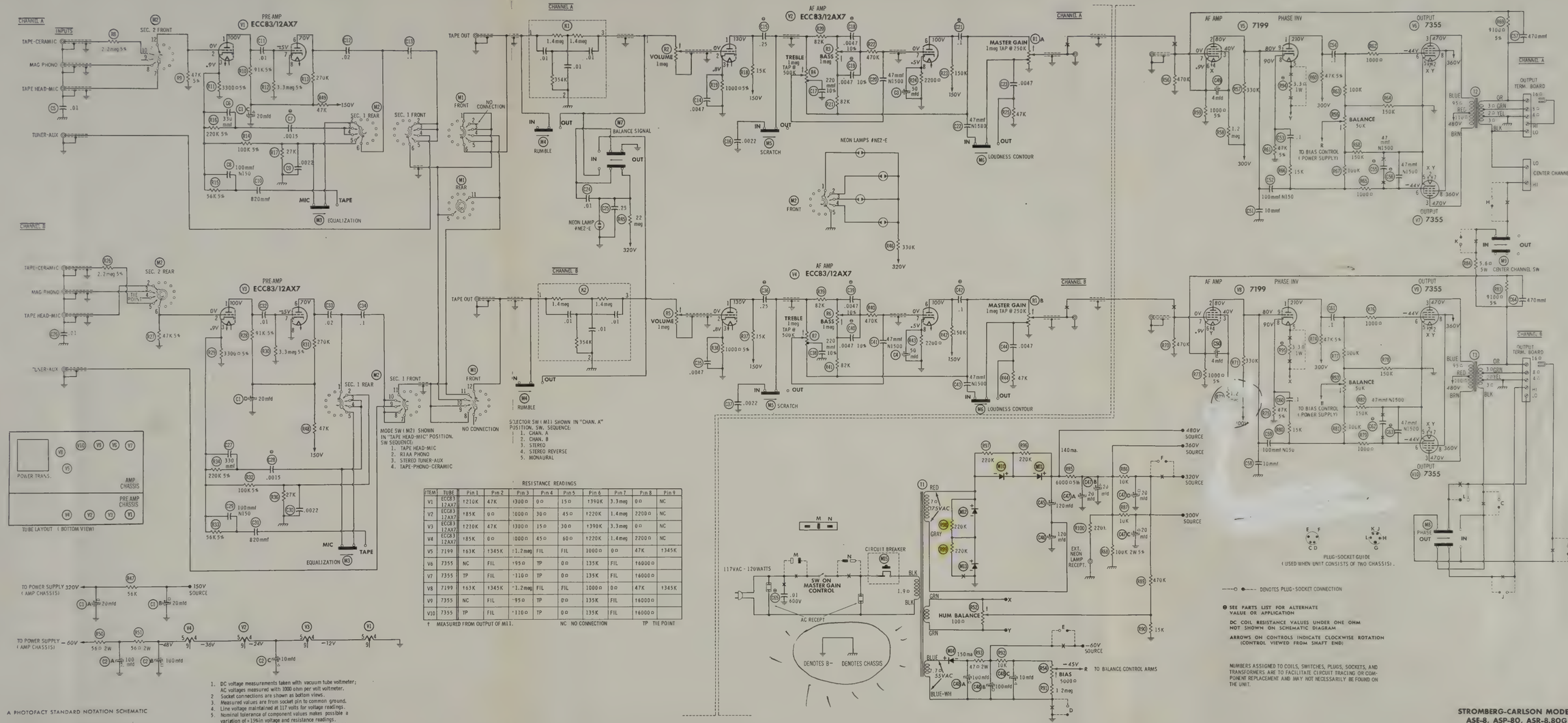
WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

Power Cord ..... Use BELDEN No. 1765-B (6 Ft. Length)
1725-K (7½ Ft. Length)



CHASSIS BOTTOM VIEW-AMP, CAPACITOR & MISC. IDENT.



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	ECC83 12AX7	†210K	47K	†300Ω	0Ω	15Ω	†390K	3.3meg	0Ω	NC
V2	ECC83 12AX7	†85K	0Ω	†000Ω	30Ω	45Ω	†220K	1.4meg	2200Ω	NC
V3	ECC83 12AX7	†210K	47K	†300Ω	15Ω	30Ω	†390K	3.3meg	0Ω	NC
V4	ECC83 12AX7	†85K	0Ω	†000Ω	45Ω	60Ω	†220K	1.4meg	2200Ω	NC
V5	7199	†63K	†345K	†1.2meg	FIL	FIL	1000Ω	0Ω	47K	†345K
V6	7355	NC	FIL	†95Ω	TP	0Ω	135K	FIL	†6000Ω	
V7	7355	TP	FIL	†110Ω	TP	0Ω	135K	FIL	†6000Ω	
V8	7199	†63K	†345K	†1.2meg	FIL	FIL	1000Ω	0Ω	47K	†345K
V9	7355	NC	FIL	†95Ω	TP	0Ω	135K	FIL	†6000Ω	
V10	7355	TP	FIL	†110Ω	TP	0Ω	135K	FIL	†6000Ω	

† MEASURED FROM OUTPUT OF M11. NC NO CONNECTION TP TIE POINT

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance of component values makes possible a variation of ±15% in voltage and resistance readings.
6. All controls at minimum, proper output load connected.

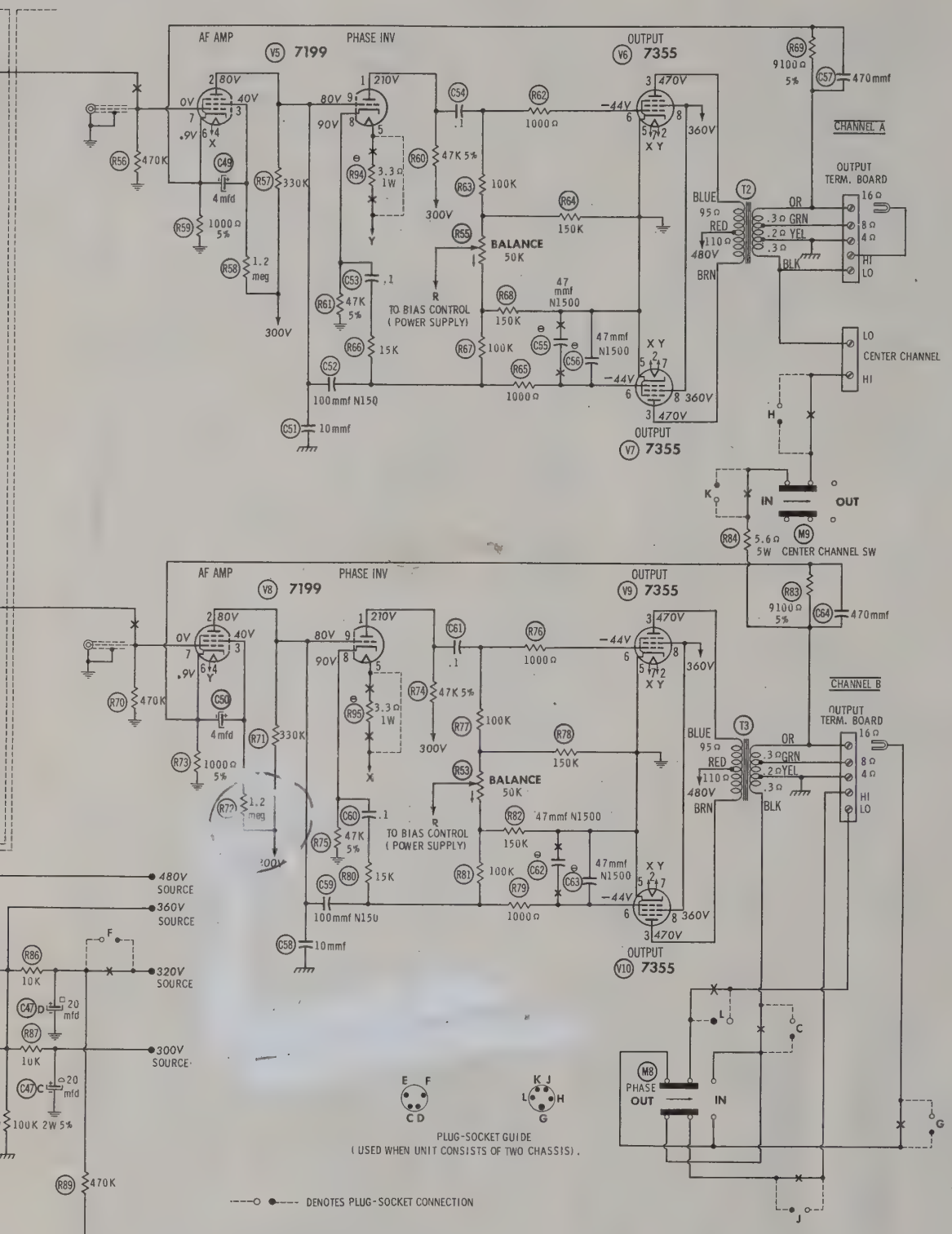
● SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM.

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

STROMBERG-CARLSON MODELS ASE-8, ASP-80, ASR-8.80G



---o ●--- DENOTES PLUG-SOCKET CONNECTION

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

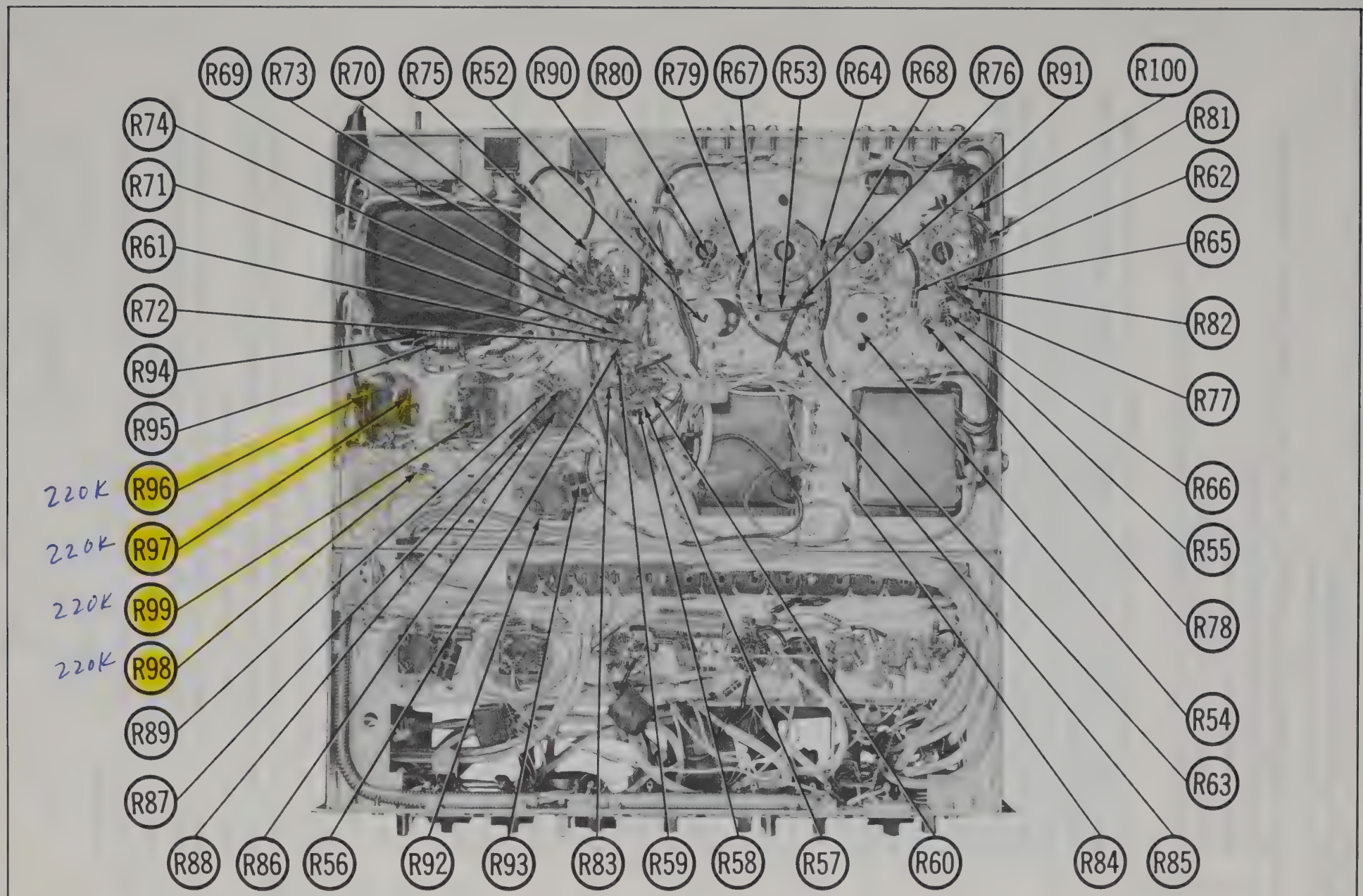
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

ANCE CONTROL ARMS

STROMBERG-CARLSON MODELS
ASE-8, ASP-80, ASR-8.80G



CHASSIS BOTTOM VIEW-AMP, RESISTOR IDENT.

PREAMP PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	Channel A Preamp.	ECC83/12AX7 (7025)*	V3	Channel B Preamp.	ECC83/12AX7 (7025)*
V2	Channel A AF Amp.	ECC83/12AX7 (7025)*	V4	Channel B AF Amp.	ECC83/12AX7 (7025)*

* Alternate

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	Stromberg-Carlson PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	▲20	450	111000-028	AFH3-36		XC4-49	FP376.5	TMQ-4616	
B	■20	450		PRS1735			TC75		
C	▲20	450							
D	20	450							
C2A	▲100	75	111000-081						TVLPS-3360*
B	■100	75							
C	▲10	75							
C3	50	6	111615-000	PRS1265	BBR50-6	QT1-15	TC29	TD-50-6	TVA-1100
C4	50	6	111615-000	PRS1265	BBR50-6	QT1-15	TC29	TD-50-6	TVA-1100

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C5	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C6	330		DI-330	DD-331	L10T33	CCD-331	B-333	10TS-T33
C7	.0015	Note 3	BPD-0015	DD-152	BYA10D15	CCD-152	B-215	5HK-D15
C8	100 N150	#552076-101				*		10TCP-T10
C9	.0022		BPD-0022	DD-222	BYA10D22	CCD-222	B-222	5HK-D22
C10	820		DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C11	.01 400V		P488N-01	D6-103	CUB4S1	4DP-1-103	GEM-411	4TM-S10
C12	.02 400V		P488N-02	DD-203	CUB4S2	4DP-2-203	GEM-412	4TM-S20
C13	.1 400V		P488N-1	DF-104	CUB4P1	4DP-1-103	GEM-401	4TM-P10
C14	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C15	.25 200V	Note 1	P288N-25		CUB2P25	2DP-4-254	GEM-2025	2TM-P25
C16	.0022		BPD-0022	DD-222	BYA10D22	CCD-222	B-222	5HK-D22
C17	220 10%		DI-220	DD-221	L10T22	CCD-221	GP322	10TS-T22
C18	.0047 10%	Note 4	DI-4700		PM6D47	CCD-472	JL-247	10TS-D47
C19	.0047 10%	Note 4	DI-4700		PM6D47	CCD-472	JL-247	10TS-D47
C20	47 N1500	#552076-470		TCL-47		*		
C21	.1 200V	Note 2	P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10
C22	47 N1500	#552076-470		TCL-47		*		
C23	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C24	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C25	.25 200V		P288N-25		CUB2P25	2DP-4-254	GEM-2025	2TM-P25
C26	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C27	330		DI-330	DD-331	L10T33	CCD-331	B-333	10TS-T33
C28	.0015	Note 3	BPD-0015	DD-152	BYA10D15	CCD-152	B-215	5HK-D15
C29	100 N150	#552076-101				*		10TCP-T10
C30	.0022		BPD-0022	DD-222	BYA10D22	CCD-222	B-222	5HK-D22
C31	820		DI-820	DD-821	BYA10T82	CCD-821	B-382	10TS-T82
C32	.01 400V		P488N-01	D6-103	CUB4S1	4DP-1-103	GEM-411	4TM-S10

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C33	.02 400V		P488N-02	DD-203	CUB4S2	4DP-2-203	GEM-412	4TM-S20
C34	.1 400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C35	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C36	.25 200V	Note 1	P288N-25		CUB2P25	2DP-4-254	GEM-2025	2TM-P25
C37	.0022		BPD-0022	DD-222	BYA10D22	CCD-222	B-222	5HK-D22
C38	220 10%		DI-220	DD-221	L10T22	CCD-221	GP322	10TS-T22
C39	.0047 10%	Note 4	DI-4700		PM6D47	CCD-472	JL-247	10TS-D47
C40	.0047 10%	Note 4	DI-4700		PM6D47	CCD-472	JL-247	10TS-D47
C41	47 N1500	#552076-470		TCL-47		*		
C42	.1 200V	Note 2	P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10
C43	47 N1500	#552076-470		TCL-47		*		
C44	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.
\# Stromberg-Carlson Part Number.
Note 1. Some versions of Model ASR-8.80G may use .22mfd in this application.
Note 2. Some versions of Model ASR-8.80G may use 400V unit in this application.
Note 3. Not used in later versions of Model ASR-8.80G.
Note 4. Value changes to .01mfd when cable is used to connect the chassis.

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA Stromberg-Carlson PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1meg	½	145000-023					Master Gain, Channel A
	250K Tap							
B	1meg	½						Master Gain, Channel B
	250K Tap							
C	Switch							
R2A	1meg	½	145000-072	B-70	A47-1meg-Z	Q13-137	U53	Volume, Channel A
B	Shaft			Not Req.	FS-3	Not Req.	Not Req.	
R3A	1meg	½	145000-090	BT-71	A47F5-1meg	Q19-137X	UT-443	Bass, Channel A
	500K Tap							Not Used
B	Shaft			Not Req.	FS-3	Not Req.	Not Req.	
R4A	1meg	½	145000-090	BT-71	A47F5-1meg	Q19-137X	UT-443	Treble, Channel A
	500K Tap							
B	Shaft			Not Req.	FS-3	Not Req.	Not Req.	
R5A	1meg	½	145000-072	B-70	A47-1meg-Z	Q13-137	U53	Volume, Channel B
B	Shaft			Not Req.	FS-3	Not Req.	Not Req.	
R6A	1meg	½	145000-090	BT-71	A47F5-1meg	Q19-137X	UT-443	Bass, Channel B
	500K Tap							Not Used
B	Shaft			Not Req.	FS-3	Not Req.	Not Req.	
R7A	1meg	½	145000-090	BT-71	A47F5-1meg	Q19-137X	UT-443	Treble, Channel B
	500K Tap							
B	Shaft			Not Req.	FS-3	Not Req.	Not Req.	

PREAMP PARTS LIST (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA IRC PART No.	WORKMAN TV PART No.	REMARKS
R8	2.2meg 5%			
R9	47K 5%			
R10	91K 5%			
R11	3300Ω 5%			
R12	3.3meg 5%			
R13	270K			
R14	100K 5%			
R15	56K 5%			
R16	220K 5%			
R17	27K			
R18	15K			
R19	1000Ω 5%			
R20	82K			
R21	82K			
R22	470K			
R23	150K			
R24	2200Ω			
R25	47K			
R26	2.2meg 5%			
R27	47K 5%			
R28	91K 5%			
R29	3300Ω 5%			
R30	3.3meg 5%			
R31	270K			
R32	100K 5%			
R33	56K 5%			
R34	220K 5%			
R35	56K			
R36	27K			
R37	15K			
R38	1000Ω 5%			
R39	82K			
R40	470K			
R41	82K			
R42	150K			
R43	2200Ω			
R44	47K			
R45	22meg			
R46	330K			
R47	56K			
R48	47K			
R49	47K			
R50	56Ω 2W			
R51	56Ω 2W			

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	Stromberg-Carlson PART No.	REPLACEMENT DATA
K1	Rumble Filter Comp.	.01mfd, .01mfd, .01mfd, 354K, 1.4meg, 1.4meg	179000-034	Centralab PC-402
K2	Rumble Filter Comp.	.01mfd, .01mfd, .01mfd, 354K, 1.4meg, 1.4meg	179000-034	Centralab PC-402

MISCELLANEOUS

ITEM No.	PART NAME	Stromberg-Carlson PART No.	NOTES
M1	Switch	158000-152	Function Selector (Rotary Wafer Type)
M2	Switch	158000-151	Mode Selector (Rotary Wafer Type)
M3	Switch	158000-058	Equalization (DPDT, Slide Type)
M4	Switch	158000-058	Rumble Filter (DPDT, Slide Type)
M5	Switch	158000-058	Scratch Filter (DPDT, Slide Type)
M6	Switch	158000-058	Loudness Contour (DPDT, Slide Type)
M7	Switch	158000-058	Balance Signal (DPDT, Slide Type)
M8	Switch	158000-058	Phase (DPDT, Slide Type)
M9	Switch	158000-058	Center Channel (DPDT, Slide Type)

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

AMP PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V5	Channel A AF Amp. - Phase Inverter	7199	V8	Channel B AF Amp. - Phase Inverter	7199
V6	Channel A Output	7355	V9	Channel B Output	7355
V7	Channel A Output	7355	V10	Channel B Output	7355

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	Stromberg-Carlson PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C45	120	300	111000-083	AFH51-36-05		XC1-21	FP149, TC78		
C46	120	300	111000-082	AFH51-36-05		XC1-21	FP149, TC78		
C47A	20	450	111000-028	AFH3-36		XC4-49	FP376.5	TMQ-4616	
B	▲20	450		PRS1735			TC75		
C	▲20	450							
D	■20	450							
C48A	▲100	75	111000-081						TVLPS-3360*
B	■100	75							
C	▲10	75							
C49	4	150	111000-050	PRS1400	BBR4-150	QT1-2	TT150X4	TD-4-150	TVA-1402
C50	4	150	111000-050	PRS1400	BBR4-150	QT1-2	TT150X4	TD-4-150	TVA-1402

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C51	10		DI-10	DD-100	L10Q1	CCD-100	GP410	10TS-Q10
C52	100 N150	#552076-101				*		10TCP-T10
C53	.1 400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C54	.1 400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C55	47 N1500	Note 1		TCL-47		*		
C56	47 N1500	Note 2		TCL-47		*		
C57	470		DI-470	DD-471	BYA10T47	CCD-471	B-347	10TS-T47
C58	10		DI-10	DD-100	L10Q1	CCD-100	GP410	10TS-Q10
C59	100 N150	#552076-101				*		10TCP-T10
C60	.1 400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C61	.1 400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C62	47 N1500	Note 1		TCL-47		*		
C63	47 N1500	Note 2		TCL-47		*		
C64	470		DI-470	DD-471	BYA10T47	CCD-471	B-347	10TS-T47
C65	.01 600V		P688N-01	D6-103	CUB6S1	6DP-2-103	GEM-611	6TM-S10

Note 1. Not used in some versions.
Note 2. Some versions use 82mmf in this application (Part No. 557076-820).
* Not normally in distributor's stock. Available thru distributor on order to manufacturer.
\# Stromberg-Carlson Part Number.

AMP PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA Stromberg-Carlson PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R52A	100Ω	2(WW)	173853-000	WN-101	A43-100	W11-084	FL100P	Hum Balance
B	Shaft			Not Req.	FKS-1/4	SK5	Not Req.	
R53A	50K	½	145000-096	AB-31	A47-50K-S	Q11-123	SU-35	Balance, Channel B
B	Shaft			AK-1	FKS-1/4	Not Req.	Not Req.	
R54A	5000Ω	½	145000-095	AB-10	A47-5000-S	Q11-114	SU-14	Bias
B	Shaft			AK-1	FKS-1/4	Not Req.	Not Req.	
R55A	50K	½	145000-096	AB-31	A47-50K-S	Q11-123	SU-35	Balance, Channel A
B	Shaft			AK-1	FKS-1/4	Not Req.	Not Req.	

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA IRC PART No.	WORKMAN TV PART No.	REMARKS
R56	470K			
R57	330K			
R58	1.2meg			
R59	1000Ω 5%			
R60	47K 5%			
R61	47K 5%			
R62	1000Ω			
R63	100K			
R64	150K			
R65	1000Ω			
R66	15K			
R67	100K			
R68	150K			
R69	91000Ω 5%			
R70	470K			
R71	330K			
R72	1.2meg			
R73	1000Ω 5%			
R74	47K 5%			
R75	47K 5%			
R76	1000Ω			
R77	100K			
R78	150K			
R79	1000Ω			
R80	15K			
R81	100K			
R82	150K			
R83	9100Ω 5%			
R84	5.6Ω 5W	PW5-5.6	5W-8Q-5.6	
R85	6000Ω 5W	PW5-6000	7W-8Q-6000	
R86	10K			
R87	10K			
R88	100K 2W 5%			
R89	470K			
R90	15K			
R91	1.2meg			
R92	10K			
R93	47Ω 2W			
R94	3.3Ω 1W			Note 1
R95	3.3Ω 1W			Note 1
R96	220K			
R97	220K			
R98	220K			
R99	220K			
R100	220K			

Note 1. Not used in later versions of Model ASR-8.80G.

TRANSFORMER (POWER)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	REPLACEMENT DATA Stromberg-Carlson PART No	Merit PART No.	Stancor PART No.	Thordarson PART No	Triad PART No	NOTES
T1	117V Ⓐ 1.25A	175V Ⓐ .560A AC	6.3V Ⓐ 3.5A	161000-225					
	SEC. 3	SEC. 4	SEC 5						
	55V Ⓐ .150A DC								

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA Stromberg-Carlson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	6500Ω CT	16Ω Tap Ⓐ 8Ω, 4Ω	161000-172					
T3	6500Ω CT	16Ω Tap Ⓐ 8Ω, 4Ω	161000-172					

POWER RECTIFIERS

ITEM No.	RATING CURRENT (Measured)	REPLACEMENT DATA Stromberg-Carlson PART No.	RCA PART No.	SARKES TARZIAN PART No.	NOTES
M10	.140A	162000-064	1N1764	40H	
M11	.140A	162000-064	1N1764	40H	
M12	.140A	162000-064	1N1764	40H	
M13	.140A	162000-064	1N1764	40H	
M14	.15A	162000-063	1N1763	40H	

MISCELLANEOUS

ITEM No.	PART NAME	Stromberg-Carlson PART No.	NOTES
M15	Circuit Breaker	128000-040	

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Power Cord ..... Use BELDEN No. 1765-B (6 Ft. Length)
1725-K (7½ Ft. Length)

CHASSIS BOTTOM VIEW-AMP, RESISTOR IDENT.

BIAS AND BALANCE ADJUSTMENT

To properly make these adjustments, the following equipment is required.

a. Two DC Milliammeters (0-100 ma).
b. Audio-oscillator, sine-wave.
c. Oscilloscope with linear sweep.
d. Resistive load, 8 or 16 ohms, 50 watts non-inductive.

Procedure:

1. Connect one lead of the load to the OUTPUT A LO terminal of the amplifier. Connect the other lead to 8 for 8 ohm load; or 16 for 16 ohm load.
2. With the power turned off, connect the milliammeters in the plate circuits of the Channel A output tubes. This may be accomplished by connecting across pins 3 and 4 of the tube sockets and unsoldering the jumper wire between pins 3 and 4.
3. Turn on the amplifier and allow 5 minute warm up. Adjust the Channel A Balance control so that the two milliammeters read the same.
4. Adjust the Bias control so that both meters read approximately 34ma.
5. Connect the Audio-oscillator to the TUNER AUX. A input of the amplifier. Set the Audio-oscillator for 100 cycles. Operate the controls as follows: PROGRAM SELECTOR to AUX, BASS and TREBLE to center of rotation, VOLUME fully clockwise, CHANNEL SELECTOR to STEREO, all slide switches to the left and MASTER GAIN CONTROL to 8.
6. Connect the scope across the output load and observe the waveform. Increase the output level of the Audio-oscillator until the sinewave begins to appear clipped or flattens out as in Fig. 1.
7. Adjust the Channel A BALANCE control until the clipping is symmetrical as in Fig. 2.
8. Remove the signal and check the milliammeters. If either meter reads more than 37ma, readjust the BIAS control so that the meter reads 37ma.
9. Disconnect the power and meters. Restore the jumpers on pins 3 and 4 of Channel A Output tube sockets.
10. Connect the meters in the plate circuit of the Channel B Output tubes as outlined in step 2.
11. Connect the resistive load and the scope to the OUTPUT B terminals as in step 1. Connect the power. Connect the Audio-oscillator to TUNER AUX B and set for 100 cycles.
12. Observe the waveform and adjust the output of the audio-oscillator until the sinewave just begins to clip. Adjust the Channel B BALANCE control until the clipping is symmetrical.
13. Remove the signal and check the meters for a maximum reading of 37ma. Readjust the Bias control if necessary so that the maximum reading does not exceed 37ma. on either meter.
14. Restore the jumpers on pins 3 and 4 of the channel B Output tube sockets.

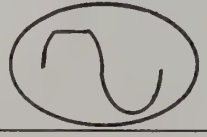
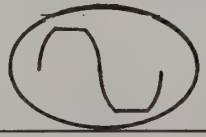
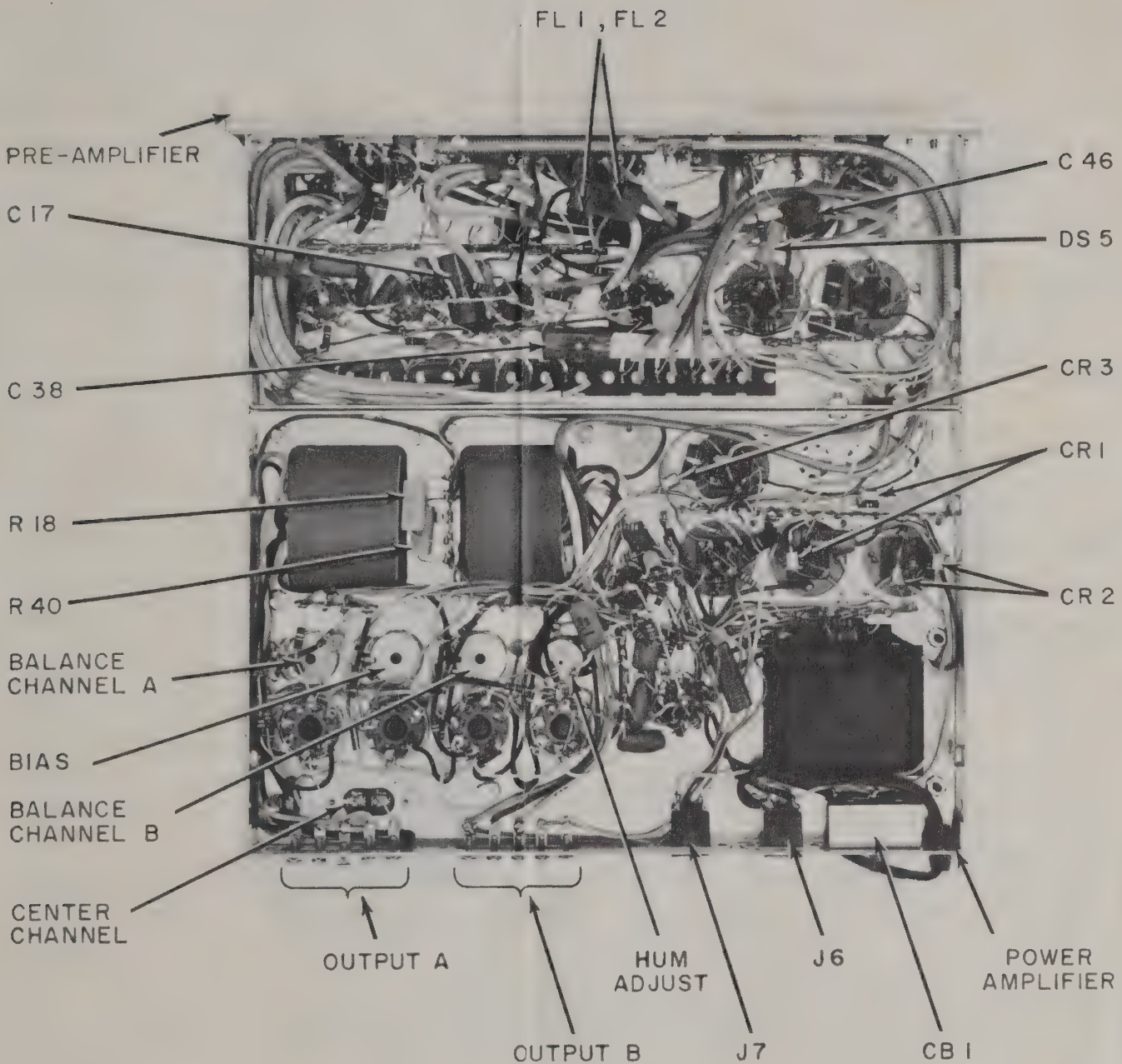
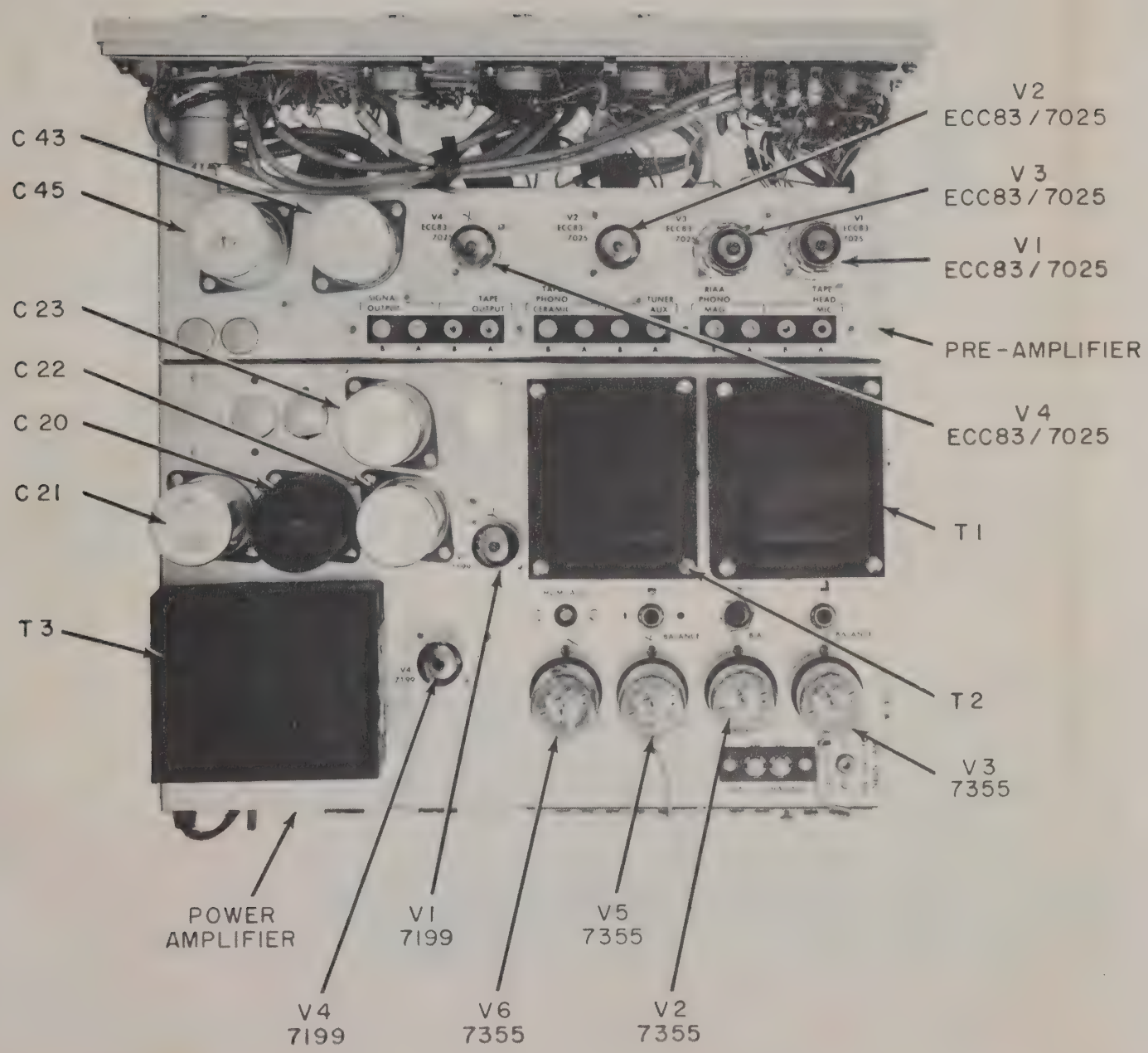
FIG. 1 

FIG. 2 



ASR-8·80 (BOTTOM VIEW)



ASR-8·80 (TOP VIEW)

for the most enjoyment from your:

STROMBERG-CARLSON

ASR-8 80 STEREO PRE-AMP/POWER AMPLIFIER COMBINATION

STROMBERG-CARLSON
A DIVISION OF **GENERAL DYNAMICS**

THE STROMBERG-CARLSON

ASR-8 80

STEREO PRE-AMP/POWER AMPLIFIER COMBINATION

You now own one of the finest, most advanced stereo amplifiers available to-day at any price. Designed by experts and built to rigid specifications from highest quality materials, it will give you years of trouble-free service. Every refinement contributing to high quality stereo reproduction has been included.

The ASR-8 80 is a "Two-in-one" amplifier consisting of a Stereo Preamplifier and a Stereo Power Amplifier, mechanically and electrically coupled together to form a powerful dual channel amplifier with a combined power output rating of 64 watts. The flexibility built into your 8 80 enables you to compensate for different room acoustics, to make use of a wide variety of program sources and to correct recording or broadcast deficiencies. It allows you to adjust tone quality, volume and dimension of sound so that to your own ears, in your own room, music and voice are reproduced with complete realism.

program selector

Turn this control to the program source you wish to select . . . phono, radio tuner or tape recorder. A neon lamp indicates which source has been chosen.

Tape Head/Mic: Use this position only if you have connected a tape head or microphone to the appropriate input terminal at the rear of the amplifier. If you do not wish to make your own recordings you will not need a complete tape recorder. Using the TAPE HEAD control position you only require a tape transport or player. The excellent pre-amp and power-amp stages of the 8 80 are designed to give you the best possible results from pre-recorded mono or stereo tapes. If you do wish to record, you will either have to add the necessary erase and bias circuits or obtain a complete tape recorder that has these features built in. (See your dealer for further information on tape recorders and transports.)

RIAA Phono Mag: If you are using a magnetic phono cartridge this is the control position you will use for playing all your records. RIAA (Record Industry Association of America) is the equalization characteristic universally adopted by record manufacturers since mid-1954.

Stereo Tuner/Aux: This control position selects auxiliary program sources such as AM/FM stereo, FM multiplex, monophonic AM or FM programs, TV or tape.

brief guide on how to set the controls . A quick and simple way to get immediate results.

(1) Set all switches A on lower panel to the left.

(2) Switch on amplifier by giving slight turn (clockwise) to Master Gain Control B.

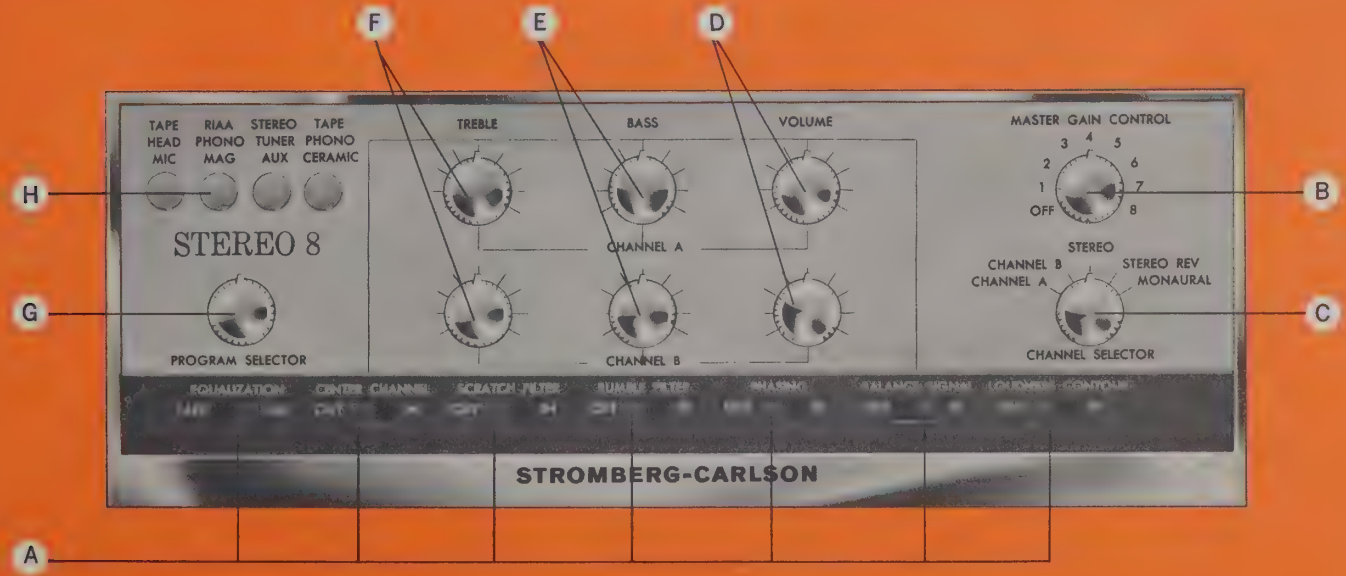
(3) Turn Channel Selector C to 'Stereo' or 'Mono' according to the program material you're going to use.

(4) Turn all Volume D, Bass E, and Treble F Controls so that their pointers face up (center or 12 o'clock setting).

(5) Turn Program Selector G until it lights up the indicator lamp that describes the program source you wish to use, H. Phono setting depends on whether you have a magnetic cartridge or a ceramic cartridge. Place record on turntable and set it in motion. If you are using a radio tuner, switch it on and select station.

(6) Turn Master Gain Control B clockwise to required volume. (If you're playing a record and there is no sound at this point, try the other phono position on Program Selector.)

Remember . . . for optimum results look up the purpose and function of all your controls and adjust the amplifier accordingly.



THE STROMBERG-CARLSON

ASR-8 80

STEREO PRE-AMP/POWER AMPLIFIER COMBINATION

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program selector

Turn this control to the program source you wish to select . . . phono, radio tuner or tape recorder. A neon lamp indicates which source has been chosen.

Tape Head/Mic: Use this position only if you have connected a tape head or microphone to the appropriate input terminal at the rear of the amplifier. If you do not wish to make your own recordings you will not need a complete tape recorder. Using the TAPE HEAD control position you only require a tape transport or player. The excellent pre-amp and power-amp stages of the 8 80 are designed to give you the best possible results from pre-recorded mono or stereo tapes. If you do wish to record, you will either have to add the necessary erase and bias circuits or obtain a complete tape recorder that has these features built in. (See your dealer for further information on tape recorders and transports.)

RIAA Phono Mag: If you are using a magnetic phono cartridge this is the control position you will use for playing all your records. RIAA (Record Industry Association of America) is the equalization characteristic universally adopted by record manufacturers since mid-1954.

Stereo Tuner/Aux: This control position selects auxiliary program sources such as AM/FM stereo, FM multiplex, monophonic AM or FM programs, TV or tape.

THE STROMBERG-CARLSON

ASR-8 80

STEREO PRE-AMP/POWER AMPLIFIER COMBINATION

You now own one of the finest, most advanced stereo amplifiers available to-day at any price. Designed by experts and built to rigid specifications from highest quality materials, it will give you years of trouble-free service. Every refinement contributing to high quality stereo reproduction has been included.

The ASR-8 80 is a "Two-in-one" amplifier consisting of a Stereo Preamplifier and a Stereo Power Amplifier, mechanically and electrically coupled together to form a powerful dual channel amplifier with a combined power output rating of 64 watts. The flexibility built into your 8 80 enables you to compensate for different room acoustics, to make use of a wide variety of program sources and to correct recording or broadcast deficiencies. It allows you to adjust tone quality, volume and dimension of sound so that to your own ears, in your own room, music and voice are reproduced with complete realism.

program selector

Turn this control to the program source you wish to select . . . phono, radio tuner or tape recorder. A neon lamp indicates which source has been chosen.

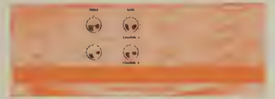
Tape Head/Mic: Use this position only if you have connected a tape head or microphone to the appropriate input terminal at the rear of the amplifier. If you do not wish to make your own recordings you will not need a complete tape recorder. Using the TAPE HEAD control position you only require a tape transport or player. The excellent pre-amp and power-amp stages of the 8 80 are designed to give you the best possible results from pre-recorded mono or stereo tapes. If you do wish to record, you will either have to add the necessary erase and bias circuits or obtain a complete tape recorder that has these features built in. (See your dealer for further information on tape recorders and transports.)

RIAA Phono Mag: If you are using a magnetic phono cartridge this is the control position you will use for playing all your records. RIAA (Record Industry Association of America) is the equalization characteristic universally adopted by record manufacturers since mid-1954.

Stereo Tuner/Aux: This control position selects auxiliary program sources such as AM/FM stereo, FM multiplex, monophonic AM or FM programs, TV or tape.

IMPORTANT: To avoid overloading and resultant distortion. The program source to either tuner or ceramic input should not exceed 0.5 volt.

Tape/Phono Ceramic: If you are using a ceramic (high output) cartridge, this is the setting you will use for playing all your records. Likewise, use it if you have a complete tape recorder (as against a tape transport) which does not provide a 'tape head' output but delivers a pre-amplified signal.



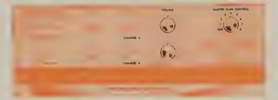
bass and treble controls

Each stereo channel has its own, independent bass and treble controls. This valuable feature allows you to compensate for a difference in tonal values that might occur between the two channels of an AM/FM stereo broadcast or with poorly recorded stereo records and tapes. Where two different model speaker systems are used, separate tone controls are invaluable in obtaining closer likeness of sound. If one of the speaker systems faces a heavily draped (high frequency absorbent) area and the other does not, separate controls again permit you to equalize the two channels. Ideally these controls should be set mid-way in the 12 o'clock position. This assumes perfect balance between the channels and ideal room acoustics.

If you listen in a very 'live' room, one that has few drapes, carpets and comparatively little upholstered furniture, high frequency or treble response will be exaggerated owing to the large number of reflecting surfaces. Turning down (counter clockwise) the treble controls will re-establish the correct relationship between the high frequencies and the rest of the audio spectrum. Conversely, increasing this control setting will compensate for a so-called "dead" room — where an abundance of drapes, carpets and upholstered furniture absorb too much treble.

A similar situation arises with the low frequencies. Bass is affected by the size and shape of your room, the height of the ceiling and the response of your ears. Generally speaking it can be said that the more wall area surrounding a speaker, the better the bass response. A corner placement, close to the floor, provides most efficient bass response; free standing, away from any wall, least efficient.

Adjust treble and bass so that in your own room, in your favorite listening area, the sound appears most realistic and true to your ears. And don't hesitate to re-adjust the controls when a record, radio program or tape does not sound right. Your Stromberg-Carlson 8 80 amplifier has a variety of controls so there need be no compromise in listening quality.



volume and gain controls

Your 8 80 amplifier features an independent VOLUME control for each of the two channels and a MASTER GAIN CONTROL. Operate this flexible arrangement as follows: With perfectly balanced speakers and program material: set both VOLUME controls to the same level . . . say mid-point (12 o'clock) and then operate the MASTER GAIN CONTROL to obtain the desired volume of sound. The MASTER GAIN CONTROL adjusts the level of both channels equally and simultaneously. You may, however, be listening to unbalanced program material, such as an AM/FM stereo broadcast. One channel sounds louder than the other. In this case, adjust the separate VOLUME controls until you obtain correct balance between the two channels. The MASTER GAIN CONTROL can then be used to raise or lower the overall sound level of the whole system without upsetting the corrected balance between the two channels.

Dual volume controls make good stereo balance possible where it is impractical to arrange the main listening area mid-way between the two speaker systems. If for example, your main listening area is slightly left of the ideal position, increase the volume of the right channel until the balance sounds right. (See BALANCE SIGNAL)

channel selector

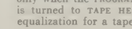
Stereo: This position should be used for all types of stereo material. Both speaker systems play.

Mono: Monophonic program material sounds fuller, more realistic when played back over the whole system rather than one channel only. When you select this setting, the monaural record, the FM broadcast, the AM broadcast, or the monaural tape is fed through both stereo channels to both speaker systems. Therefore, select MONO position for all monophonic programs.

Stereo reverse: This control position simply reverses the left signal to the right channel and vice versa. This may be useful for stereo broadcasts.

CHANNEL A: Only Channel A material is played through the Channel A amplifier and speaker system. CHANNEL B: Only Channel B material is played through the Channel B amplifier and speaker system. This feature can be used in several ways. It permits a comparison between the program materials contained on both channels of a stereo program. For instance, if you wish to balance an AM/FM stereo program: First turn on both sections of the tuner. Next, set the channel selector to CHANNEL A which usually carries the FM signal. Tune in the station you require and adjust Channel A volume and tone to your taste. Now switch to CHANNEL B and adjust in the same manner. Switch forward and backward between A and B to check whether you have the same station, equal volume and closely matching tone. Finally turn the control to STEREO and enjoy a perfectly balanced program.

loudness contour



When you are playing music at a low level of sound, the human ear responds more to mid-range frequencies than to bass and treble. In other words, at low level both highs and lows tend to "disappear." By switching IN the LOUDNESS CONTOUR your 8 80 electronically applies the correct amount of boost in both areas to restore the proper balance over the entire audio spectrum.

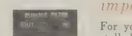
balance signal

This unique control permits you to balance easily both stereo channels without the necessity for special records. Although individual volume controls may be set to any position for balancing we suggest the following: Switch on the amplifier. Turn MASTER GAIN CONTROL to 5. Set Channel A volume to minimum, Channel B volume to mid-position. Set Channel SELECTOR to STEREO. Now switch IN the BALANCE SIGNAL. You will notice the balance signal (a series of pulses) comes from the right speaker system only. Turn up the Channel A VOLUME Control. As you increase Channel A VOLUME, the signal moves towards the left. Continue to turn up Channel A VOLUME until the signal is heard mid-way between the two loudspeaker systems. Switch OUT the BALANCE SIGNAL. Operation of the MASTER GAIN CONTROL will adjust overall volume and will insure that stereo programs will be well-balanced in your particular listening area.

phasing

Where more than one speaker is used for music reproduction, as is always the case with stereo, they must be connected so that they aid rather than work against each other. If two speakers are out of phase, the very low bass frequencies tend to cancel out. This same cancellation takes place when you play stereo material that has been recorded out of phase. In extreme cases, improper phasing can result in hollow sounds, exaggerated stereo with a false positioning of certain instruments relative to the orchestra. Switch the PHASE CONTROL IN and OUT and compare the richness and fullness of the bass reproduction. Leave the switch in the position that gives the best results.

rumble filter



A badly worn or inferior turntable or record changer—even a turntable used by your local FM station—may introduce an undesirable extreme low frequency noise known as "rumble." You can eliminate it by moving this switch to the IN position, without substantially affecting the good bass reproduction of the amplifier.

scratch filter

Set this switch to IN to attenuate undesirable very high frequencies such as needle scratch (particularly on older records) and radio interference.

center channel

This switch controls the output connection provided at the rear of the amplifier for the addition of a center channel speaker. It delivers a mixed signal derived from channel A plus channel B. A center channel speaker must be used in a mid-way position between two well-separated main channel speaker systems in a reasonably large room. In this application it would help to provide a wide 'wall' of evenly distributed stereo sound.

equalization

This switch becomes effective only when the PROGRAM SELECTOR is turned to TAPE HEAD/MIC. It provides proper equalization for a tape head or microphone.

important note — circuit breaker

For your convenience, Stromberg-Carlson has installed an 'eternal fuse' in the form of a circuit-breaker. In the case of an unusually high voltage surge or component failure, the circuit-breaker removes power from the amplifier. Re-set by pushing the red knob mounted through the rear of the amplifier chassis. If it continues to disengage, consult your serviceman.

AMPLIFIER SPECIFICATIONS
ASR-8 80

POWER OUTPUT (continuous)
64 watts (32 watts per channel) 64 watts total

POWER OUTPUT (music power IHFM rating)
(35 watts per channel) 70 watts total

INTERMODULATION DISTORTION
0.3% at normal listening level
1% at 20 watts per channel continuous power
3% at 40 watts per channel continuous power
Measurements made with standard 4:1 ratio, 60 and 7,000 cps

TOTAL HARMONIC DISTORTION
0.9% at 32 watts per channel continuous RMS power

FREQUENCY RESPONSE . . . . . 18—38,000 cps ±0.8 db

HUM AND NOISE (db below rated output)
RESIDUAL (gain min.) . . . . . 90 db
MAG. PHONO (gain max.) . . . . . 58 db
TUNER (gain max.) . . . . . 74 db

SENSITIVITY
TUNER . . . . . 0.2 V
MAGNETIC PHONO . . . . . 2.5 MV
CERAMIC PHONO . . . . . 0.4 V

INPUT IMPEDANCE
Tuner/Auxiliary . . . . . 1 Meg.
Magnetic Phono . . . . . 47 K
Ceramic Phono/Tape . . . . . 2.2 Meg.

OUTPUT IMPEDANCE
Channel A—4, 8, 16 ohms
Channel B—4, 8, 16 ohms
Center speaker
(A plus B) . . . . . 8, 16 ohms across 4 ohm taps
Tape recorder . . . . . high impedance

TONE CONTROL RANGE
Bass control (50 cps) . . . . . ±17 db
Treble control (20 kc) . . . . . ±15 db

AC POWER OUTLETS
Two; one switched, one non-switched

Front panel cut-out for component mounting . 13⅜" x 4¼"

COMMERCIAL PRODUCTS DIVISION
STROMBERG-CARLSON
A DIVISION OF GENERAL DYNAMICS
ROCHESTER 3, NEW YORK

Part No. 146012-042

GLP 23193 Printed in U.S.A.

SERVICE INFORMATION

MODEL ASR-8·80

STEREO "8" AMPLIFIER

Unit Description - The ASR-8·80 is a "two-in-one" amplifier consisting of a Stereo Preamplifier and a Stereo Power Amplifier. These two amplifiers are mechanically and electrically coupled together to form a powerful dual channel amplifier with a combined power output rating of 64 watts. The amplifier incorporates separate volume, treble and bass controls for each channel and a master gain control which controls the audio volume of both channels and serves as the AC power switch. The ASR-8·80 also features seven slide switches to control Center Channel operation, Scratch Filter, Rumble Filter, Phasing, Balance Signal, Loudness Contour and provide Equalization for Tapehead or Microphone. The four neon lamps mounted over the Program Selector switch visually indicate, in addition to the indicator knob, the selected program source. The following schematics, parts list and material will refer to the ASR-8·80 as if it were two separate chassis.

Power Requirements - The power required to properly operate the ASR-8·80 is 117 volts ac at 60 cycles, 175 watts.

Circuit Breaker - This amplifier is equipped with a 3.5 amp circuit breaker capable of being reset, instead of using a "one-time" fuse. The circuit breaker (designated CB1 on the Power Amplifier Schematic) removes power from the amplifier in the event of an excessive voltage surge or failure of a component. To reset the circuit breaker, simply push in on the red knob mounted through the rear of the chassis.

Voltage Readings - Voltage readings are shown on the schematics for both the Preamplifier and Power Amplifier. Measurements are made with no signal input. Slight variations in readings may be due to the tolerance of the components. All voltage measurements are made to chassis using a vacuum-tube-voltmeter.

IMPORTANT - To avoid overloading and resultant distortion, the program source to either the Tuner or Ceramic input should not exceed 1 volt. Either attenuate the signal for a maximum of 1 volt, or do not operate the CHANNEL VOLUME controls above mid-position. The Magnetic Phono or the Tapehead inputs should never exceed 100 millivolts.

FUNCTION OF CONTROLS

1. PROGRAM SELECTOR - Provides selection of desired program source. A neon lamp indicates which source has been selected.

2. TONE CONTROLS (BASS AND TREBLE) - Each Channel is provided with separate tone controls. The TREBLE controls increase or decrease the high frequency response of each channel individually. The BASS controls increase or decrease the low frequency response of each channel individually.

3. VOLUME CONTROLS - These controls increase or decrease the audio volume level of each channel individually to permit balancing of the system.

4. MASTER GAIN CONTROL - Increases or decreases the audio volume level of both channels simultaneously without affecting the balance between channels. The AC power switch is also incorporated with this control.

5. EQUALIZATION - Provides proper equalization for a tape head or microphone.

6. CENTER CHANNEL - Permits the addition of a center loudspeaker system (mixed output of Channel A plus Channel B).

7. SCRATCH FILTER - This switch provides attenuation of undesirable high-frequencies, such as, needle scratch, radio interference, etc.

8. RUMBLE FILTER - Provides attenuation of undesirable extremely low-frequencies, such as, turntable or record changer rumble.

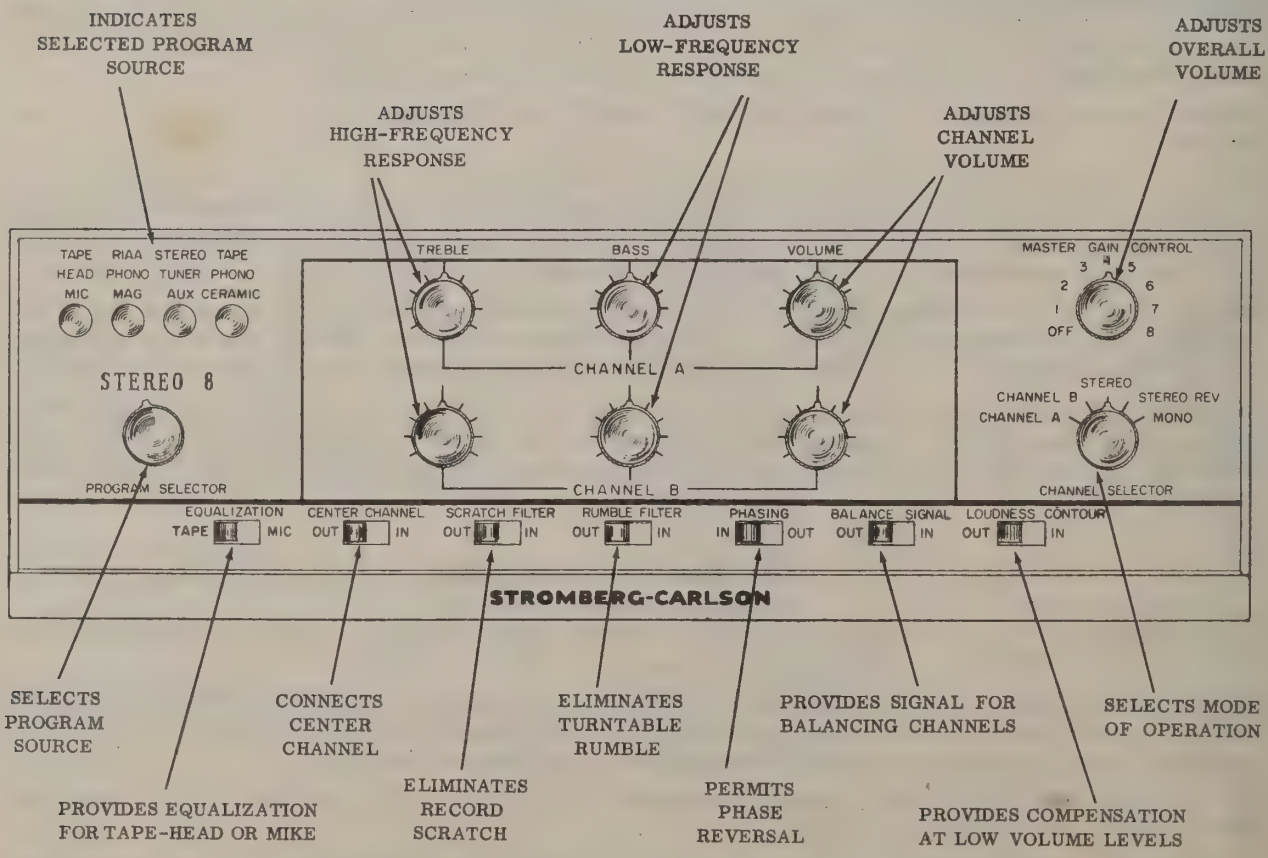
9. PHASING - Provides a means of reversing the phase of one of the loudspeaker systems in order to compensate for phase reversals in recordings or in stereo braodcasts.

10. BALANCE SIGNAL - Permits precise balancing and phasing of the two stereo channels.

11. LOUDNESS CONTOUR - The human ear is relatively insensitive to the high and low ends of the audio spectrum at low volume levels. The LOUDNESS CONTOUR switch provides compensation at both the high and low ends of the audio spectrum in order to maintain the proper balance of low, mid and high frequencies at low volume levels.

12. CHANNEL SELECTOR - Permits operation of the amplifier in five different modes of operation:

(a) CHANNEL A - Reproduction of Channel A program material from Channel A loudspeaker system only.
(b) CHANNEL B - Reproduction of Channel B program material from Channel B loudspeaker system only.
(c) STEREO - Reproduction of stereophonic program material through Channel A and Channel B in a normal manner.
(d) STEREO REV - Reverses stereophonic program so that Channel A program material is reproduced by Channel B loudspeaker system; and Channel B program material is reproduced by Channel A loudspeaker system.
(e) MONO - Permits playback of monophonic program material through both Channel A and Channel B.



(j) Connect the resistive load and the oscilloscope to the OUTPUT B terminals as outlined in step (a). Connect ac power. Connect the audio-oscillator to TUNER AUX B input and adjust for an output of 100 cycles.
(k) Observe the waveform. Adjust the output of the audio-oscillator until the sine-wave just begins to clip. Adjust the BALANCE control until the clipping is symmetrical.
(l) Remove the signal and check the milliammeters for a maximum of 37 milliamperes. Readjust the BIAS control if necessary so that the maximum reading on either meter is 37 milliamperes.
(m) Restore jumpers between pins 3 and 4 of the tube sockets of V5 and V6.

METHOD 2 - The procedure outlined below is for complete electronic laboratories having a low-distortion audio-oscillator and a harmonic distortion analyzer. This method is the most accurate and should be used for critical measurements and evaluation.

1. Equipment Required -
   (a) Two dc milliammeters capable of reading 0 - 100 milliamperes.
   (b) Audio-oscillator, sine-wave.
   (c) Resistive load (8 or 16 ohms, 50 watts, non-inductive).
   (d) Harmonic distortion analyzer.

2. Procedure -
   (a) Connect one lead of the resistive load to the OUTPUT A LO terminal of the amplifier. Connect the other lead of the resistive load to 8 for an 8 ohm load; or to 16 for a 16 ohm load.
   (b) CAUTION - Disconnect ac power. Connect the milliammeters in the plate circuits of V2 and V3. Unsolder jumper wire between pins 3 and 4.
   (c) Connect ac power. Turn on amplifier and allow a five minute warm up. Adjust BALANCE control so that both milliammeters read the same. Adjust the BIAS control so that both milliammeters read approximately 34 milliamperes.
   (d) Connect the audio-oscillator to the TUNER AUX A input of the amplifier. Adjust the output of the audio-oscillator for 50 cycles.
   (e) Operate the amplifier controls as follows: PROGRAM SELECTOR to AUX; BASS and TREBLE to mid-position; VOLUME to maximum clockwise position; CHANNEL SELECTOR to STEREO; all slide switches to the left, MASTER GAIN CONTROL to 8.
   (f) Connect a harmonic distortion analyzer and an ac vacuum-tube-voltmeter across the resistive load. Adjust the output level of the audio-oscillator for a reading of 15.5 volts across 8 ohms or 22 volts across 16 ohms as indicated by the ac vacuum-tube-voltmeter.
   (g) Adjust the BALANCE control for minimum distortion, as indicated by the harmonic distortion analyzer.
   (h) Remove the signal and check the milliammeters for a maximum of 37 milliamperes. Readjust the BIAS control if necessary so that the maximum reading on either meter is 37 milliamperes.
   (i) CAUTION - Disconnect ac power. Remove the milliammeters from the tube sockets of V2 and V3. Restore the jumpers unsoldered in step b.
   (j) Connect the milliammeters in the plates of V5 and V6 as outlined in step b.
   (k) Connect the audio-oscillator to TUNER AUX B input. Connect the resistive load, harmonic distortion analyzer and ac vacuum-tube-voltmeter to OUTPUT B terminals as outlined in step (a).
   (l) Connect ac power. Adjust the output of the audio-oscillator for a reading of 15.5 volts across 8 ohms or 22 volts across 16 ohms.
   (m) Adjust BALANCE control for minimum distortion, as indicated by the harmonic distortion analyzer.
   (n) Remove the signal and check the milliammeters for a maximum reading of 37 milliamperes. If necessary, readjust the BIAS control for a maximum reading on either meter of 37 milliamperes.
   (o) Reseal all controls.
   (p) Remove all equipment and restore the jumpers on tube sockets of V5 and V6.

ADJUSTMENTS

1. Hum Adjustments - Connect an ac voltmeter across the OUTPUT A LO and HI terminals. Turn on amplifier. Operate the MASTER GAIN CONTROL to minimum. Adjust HUM control for minimum meter reading. Reverse power plug. Leave the power plug in the position that results in minimum hum.

2. Bias and Balance Adjustments - These controls are adjusted for optimum performance and sealed at the factory.

IMPORTANT - THESE ADJUSTMENTS MUST BE MADE ONLY BY QUALIFIED TECHNICIANS USING THE PROPER TEST EQUIPMENT.

Two methods of adjusting these controls are outlined below. The first method can be performed by most qualified technicians using normally available equipment. The second method requires the use of laboratory equipment such as a low-distortion audio-oscillator and an accurate harmonic distortion analyzer.

METHOD 1 - This method will insure correct bias and good balance of the output stages, however, Method 2 is more accurate and should be used for critical measurements and evaluation.

1. Equipment Required -
   (a) Two dc milliammeters capable of reading 0 - 100 milliamperes.
   (b) Audio-oscillator, sine-wave. (0.1% distortion or less at 1 volt output)
   (c) Oscilloscope with linear sweep.
   (d) Resistive load (8 or 16 ohms, 50 watts non-inductive).

2. Procedure -
   (a) Connect one lead of the resistive load to the OUTPUT A LO terminal of the amplifier. Connect the other lead of the resistive load to 8 for an 8 ohm load; or to 16 for a 16 ohm load.
   (b) CAUTION - Disconnect ac power. Connect the milliammeters in the plate circuits of V2 and V3. This can be accomplished by connecting the milliammeter leads to pins 3 and 4 of the tube sockets. Unsolder the jumper wire between pins 3 and 4.
   (c) Connect ac power. Turn on amplifier and allow a five minute warm up. Adjust the BALANCE control so that the two milliammeters read the same.
   (d) Adjust the BIAS control so both meters read approximately 34 milliamperes.
   (e) Connect the audio-oscillator to the TUNER AUX A input of the amplifier. Adjust the output of the audio-oscillator for 100 cycles. Operate amplifier controls as follows: PROGRAM SELECTOR to AUX; BASS and TREBLE to mid-point of rotation; VOLUME to maximum clockwise position; CHANNEL SELECTOR to STEREO; all slide switches to the left, MASTER GAIN CONTROL to 8.

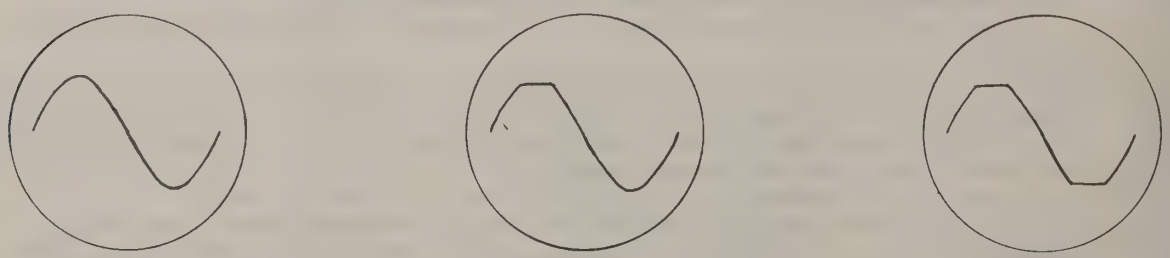


FIGURE 2 OSCILLOSCOPE PATTERNS X-71581

   (f) Connect an oscilloscope across the output load and observe the waveform. Increase the output level of the audio-oscillator until the sine-wave just begins to clip or flatten out as shown in figure 2B. Adjust the BALANCE control until the clipping is symmetrical as shown in figure 2C.
   (g) Remove signal and check milliammeters. If either meter indicates higher than 37 milliamperes, readjust the BIAS control so that the maximum reading is 37 milliamperes.
   (h) CAUTION - Disconnect ac power. Restore the jumpers between pins 3 and 4 of the tube sockets of V2 and V3.
   (i) Connect the milliammeters in the plates of V5 and V6 as outlined in step b.

PREAMPLIFIER

REPLACEMENT PARTS LIST

SYMBOL	DESCRIPTION	S-C PART NUMBER
Tubes		
V1, V2, V3, V4	Tube, ECC83	162003-051
Capacitors		
C1, C22, C45	Capacitor, Ceramic Disc, .01uf/500V, 20% (Z5U)	552076-103
C3, C24	Capacitor, Mylar, .1uf/200V, 20%	552117-104
C4, C25	Capacitor, Ceramic Disc, 1500uuf/500V, 20% (Z5U)	552076-152
C5, C26	Capacitor, Ceramic Disc, 820uuf/500V, 20% (Z5U)	552076-821
C6, C27	Capacitor, Ceramic Disc, 330uuf/500V, 20% (Z5U)	552076-331
C7, C28	Capacitor, Mylar, .01uf/400V, 20%	552118-103
C8, C29	Capacitor, Mylar, .02uf/400V, 20%	552118-203
C10, C21, C31, C42	Capacitor, Ceramic Disc, 4700uuf/500V, 20% (Z5U)	552076-472
C11, C32	Capacitor, Mylar, .22uf/400V	552118-224
C12, C13, C33, C34	Capacitor, Ceramic Disc, 4700uuf/500V, 10% (Z5U)	552077-472
C15, C20, C36, C41	Capacitor, Ceramic Disc, 47uuf/500V, 20% (Z5U)	552076-470
C16, C37	Capacitor, Ceramic Disc, 220uuf/500V, 10% (Z5U)	552077-221
C17, C38	Capacitor, Electrolytic, 50uf/6V	111615-000
C18, C39, C48, C50	Capacitor, Ceramic Disc, 2200uuf/500V, 20% (Z5U)	552076-222
C19, C40	Capacitor, Mylar .1uf/400V	552118-104
C43	Capacitor, Electrolytic, 20uf/450V; 20/450V; 20/45V; 20/450V	111000-028
C44	Capacitor, Electrolytic, 100uf/75V; 100/75V; 10/75V	111000-081
C46	Capacitor, Mylar, .25uf/200V, 20%	552117-254
C47, C49	Capacitor, Ceramic Disc, 100uuf/500V, 20% (Z5U)	552076-101
Resistors		
R1, R30	Resistor, 2.2 Meg., 1/2W, 5%	552000-225
R2, R31	Resistor, 47K, 1/2W, 5%	552000-473
R3, R32	Resistor, 3.3K, 1/2W, 5%	552000-332
R5, R34	Resistor, 100K, 1/2W, 5%	552000-104
R6, R35	Resistor, 56K, 1/2W, 5%	552000-563
R7, R36	Resistor, 220K, 1/2W, 5%	552000-224
R10, R39	Resistor, 91K, 1/2W, 5%	552000-913
R11, R40	Resistor, 3.3 Meg., 1/2W, 5%	552000-335
R12, R41	Resistor, 270K, 1/2W, 5%	552000-274
R13, R42	Resistor, 27K, 1/2W, 10%	554001-273
R14, R43	Control, Volume	145000-072
R15, R44	Resistor, 1K, 1/2W, 5%	554000-102
R16, R45	Resistor, 15K, 1/2W, 10%	554001-153
R17, R21, R46, R50	Resistor, 82K, 1/2W, 10%	554001-823
R18, R20, R47, R49	Control, Bass & Treble	145000-090
R19, R48	Resistor, 470K, 1/2W, 10%	554001-474
R22, R52	Resistor, 2.2K, 1/2W, 10%	554001-222
R23, R53	Resistor, 150K, 1/2W, 10%	554001-154
R24, R54, R61, R62	Resistor, 47K, 1/2W, 10%	554001-473
R25, S10	Control, Master Gain (AC Power Switch)	145000-023
R60	Resistor, 56K, 1/2W, 10%	554001-563
R63, R64	Resistor, 56 ohms, 2W, 10%	554007-560
R65	Resistor, 22 Meg., 1/2W, 10%	554001-226
R66	Resistor, 330K, 1/2W, 10%	554001-334

PREAMPLIFIER (Cont'd)

SYMBOL	DESCRIPTION	S-C PART NUMBER
Chassis		
	Escutcheon, Gold	125000-059
	Knob, Gold	134000-161
	Face Plate, Gold & White	142000-120
	Foot, Mounting	163000-118
Switches		
S1	Switch, Program Selector	158000-152
S2, S4, S5, S6, S7, S11, S12	Switch, Slide	158000-058
S3	Switch, Channel Selector	158000-151
S10	See R25	
Miscellaneous		
DS1, DS2, DS3, DS4	Indicator, Neon Lamp (NE2-E) (with cover)	137000-011
DS5	Neon Lamp (NE2-E)	559996-027
FL1, FL2	Rumble Filter	179000-034
J1 thru J12	Connector, Phono	165000-022
XV1, XV3	Socket, 9 Pin Shield	559999-004
XV2, XV4	Socket, 9Pin, Black	555025-131

POWER AMPLIFIER

REPLACEMENT PARTS LIST

SYMBOL	DESCRIPTION	S-C PART NUMBER
Tubes		
V1, V4	Tube, 7199 (Voltage Amp/Phase Splitter)	555035-945
V2, V3, V5, V6	Tube, 7355 (Power Output)	555035-950
Capacitors		
C1, C11	Capacitor, Electrolytic, 4uf/150V	111000-050
C2, C10	Capacitor, Ceramic Disc, 10uuf/500V, 20%, (Z5U)	552076-100
C3, C4, C13, C14	Capacitor, Mylar, .1uf/400V, 20%	552118-104
C5, C15	Capacitor, Ceramic Disc, 470uuf/500V, 20%, (Z5U)	552076-471
C6, C16	Capacitor, Ceramic Disc, 100uuf/500V, 20% (Z5U)	552076-101
C20	Capacitor, Electrolytic, 120uf/300V (Paper Casing)	111000-083
C21	Capacitor, Electrolytic, 120uf/300V	111000-082
C22	Capacitor, Electrolytic, 20uf/450V; 20/450V; 20/450V; 20/450V	111000-028
C23	Capacitor, Electrolytic, 100uf/75V; 100/75V; 10/75V	111000-081
C27, C17	Capacitor, Ceramic Disc, 82uuf/500V, 20% (Z5U)	552076-820

Resistors

R1, R21, R51	Resistor, 470K, 1/2W, 10%	554001-474
R2, R22	Resistor, 1K, 1/2W, 5%	554000-102
R3, R23, R47	Resistor, 1.2 Meg., 1/2W, 10%	554001-125
R4, R24	Resistor, 330K, 1/2W, 10%	554001-334
R5, R6, R25, R26	Resistor, 47K, 1/2W, 5%	554000-473
R7, R9, R27, R29	Resistor, 100K, 1/2W	554001-104
R8, R28	Control, Balance	145000-096
R10, R13, R30, R33	Resistor, 1K, 1/2W, 10%	554001-102
R11, R12, R31, R32	Resistor, 150K, 1/2W, 10%	554001-154
R14, R34	Resistor, 9.1K, 1/2W, 5%	554000-912
R15	Resistor, 220K, 1/2W, 10%	554001-224
R16, R35, R52	Resistor, 15K, 1/2W, 10%	554001-153
R18	Resistor, Fixed, W.W., 5.6 ohms, 5W, 10%	552116-056
R40	Resistor, 6K, 5W, 10%	149000-026
R41, R42, R45	Resistor, 10K, 1/2W, 10%	554001-103
R44	Resistor, 47 ohms, 2W, 10%	554007-470
R46	Potentiometer, 5K Bias	145000-095
R50	Potentiometer, Hum Balance, 100 ohm, 2W	173853-000
R53	Resistor, 100K, 2W, 5%	554006-104

Transformers

T1, T2	Transformer, Output	161000-172
T3	Transformer, Power	161000-225

Miscellaneous

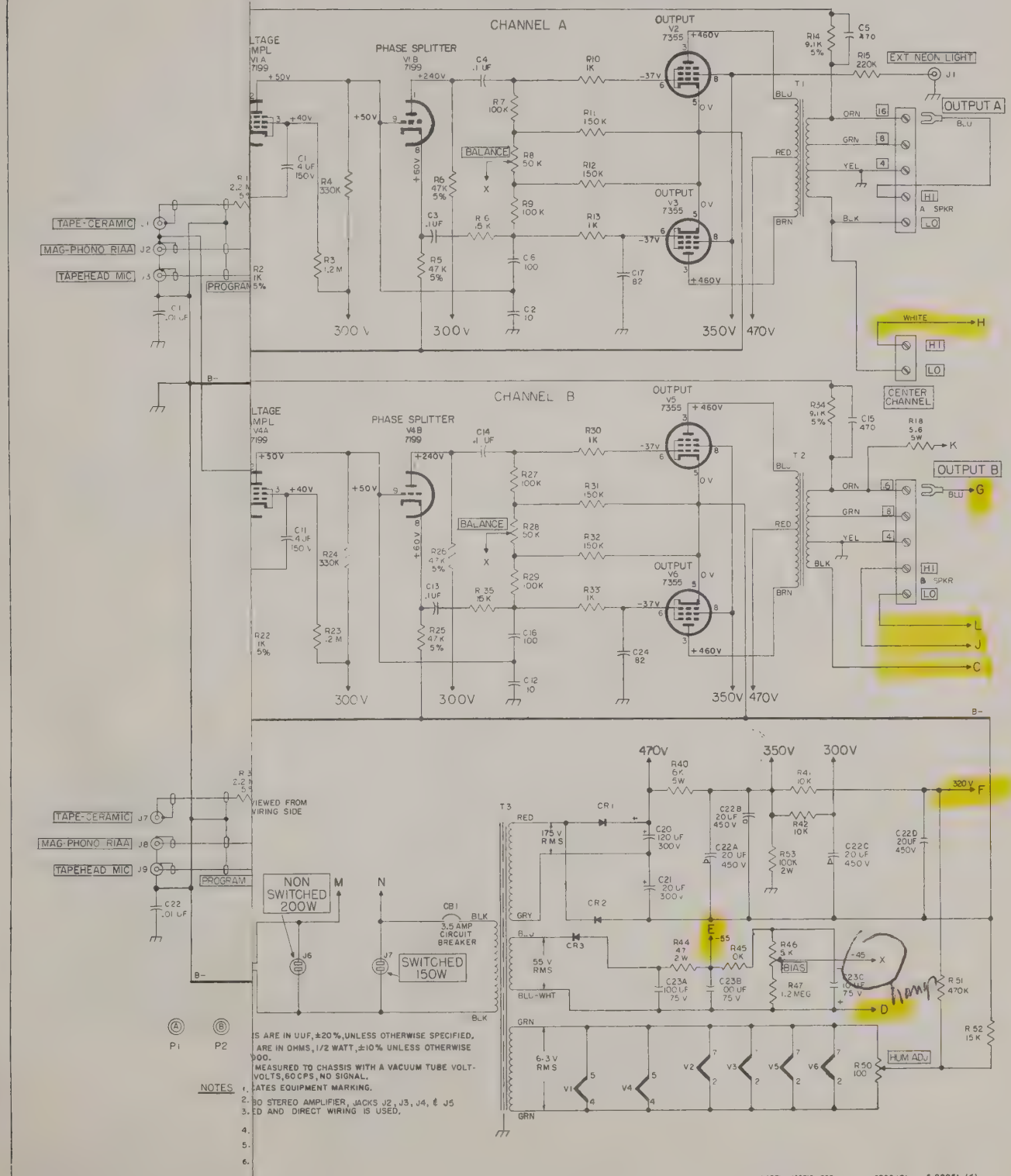
	Foot, Mounting	163000-118
CB1	Circuit Breaker, 3.5 Amp.	128000-040
CR1, CR2	Rectifier, Silicon	162000-063
CR3	Rectifier, Silicon	162000-064
J1	Jack Phono	152626-000
J2	Connector, Signal	31539-000
J3	Socket, 4 Pin	165000-035
J4	Socket, 5 Pin Phasing	152000-010
J5	Socket, AC	152000-061
XV1, XV4	Socket, 9Pin	555023-001
XV2, XV3, XV6, XV7	Socket, 8 Pin Octal	152668-000

NOTES

STROMBERG-CARLSON

A DIVISION OF GENERAL DYNAMICS CORPORATION

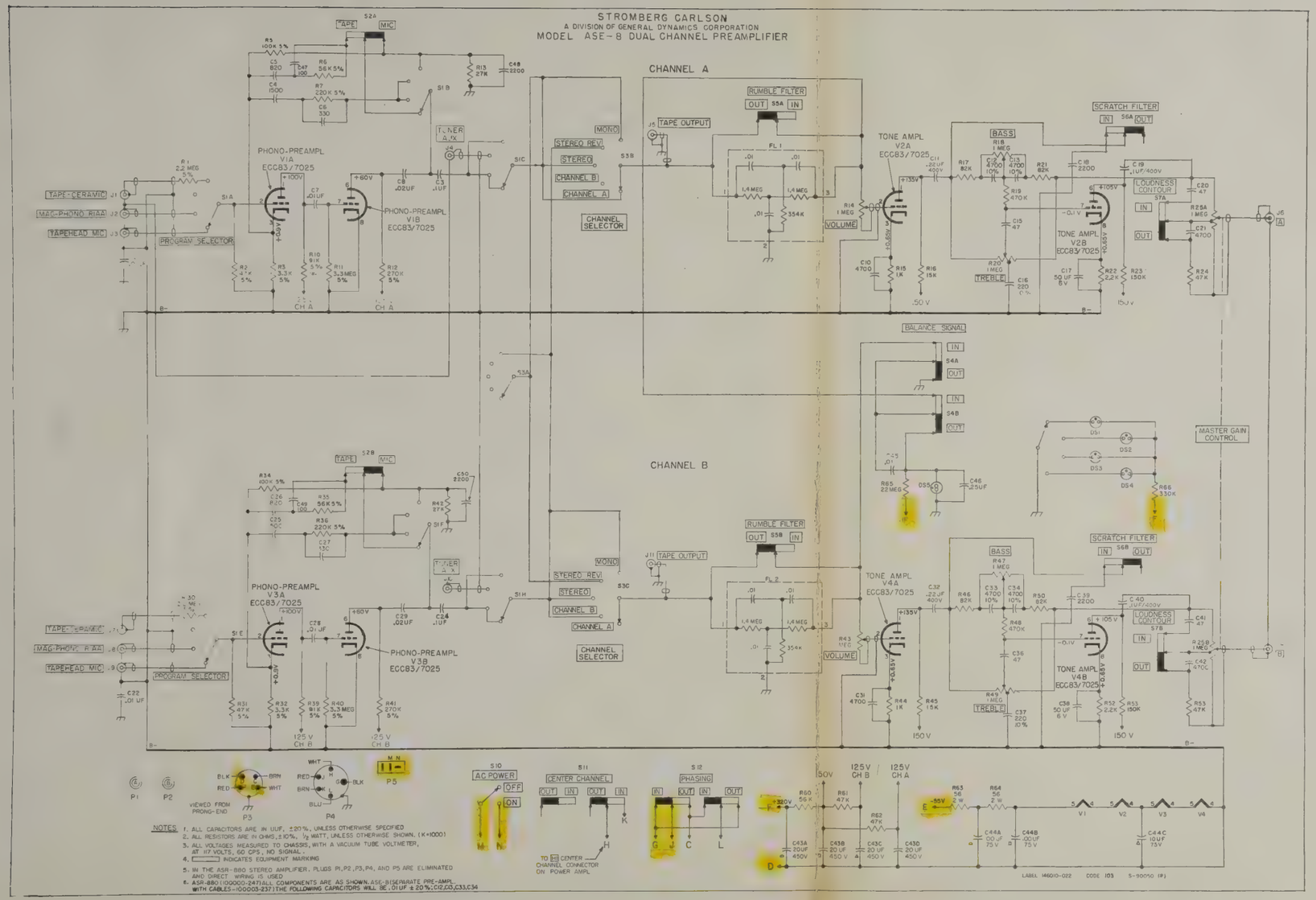
MODEL ASP-80 DUAL CHANNEL POWER AMPLIFIER



LABEL 146010-023 CODE 161 5-90051 (6)

NOTES

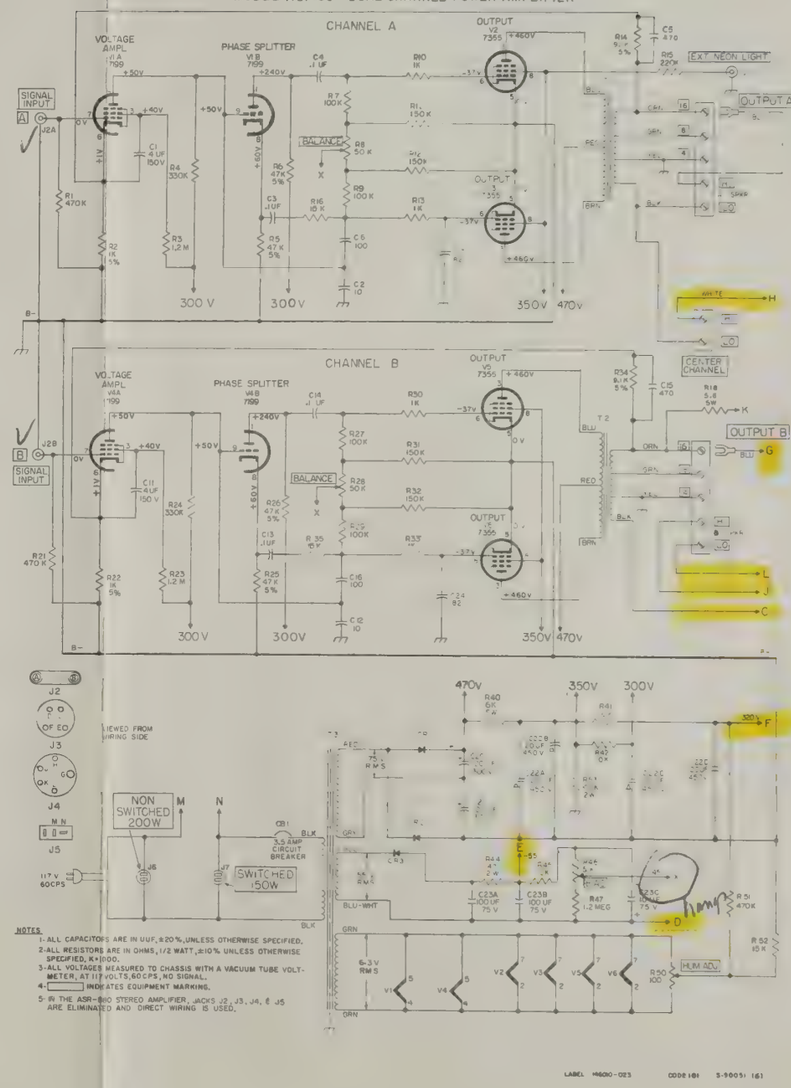
STROMBERG CARLSON
A DIVISION OF GENERAL DYNAMICS CORPORATION
MODEL ASE-8 DUAL CHANNEL PREAMPLIFIER



NOTES
1. ALL CAPACITORS ARE IN UUF, ±20%, UNLESS OTHERWISE SPECIFIED
2. ALL RESISTORS ARE IN OHMS, ±10%, 1/2 WATT, UNLESS OTHERWISE SHOWN. (K=1000)
3. ALL VOLTAGES MEASURED TO CHASSIS, WITH A VACUUM TUBE VOLTMETER, AT 117 VOLTS, 60 CPS, NO SIGNAL.
4. [ ] INDICATES EQUIPMENT MARKING
5. IN THE ASR-880 STEREO AMPLIFIER, PLUGS P1, P2, P3, P4, AND P5 ARE ELIMINATED AND DIRECT WIRING IS USED
6. ASR-880 (100000-247) ALL COMPONENTS ARE AS SHOWN. ASE-8 (SEPARATE PRE-AMPL WITH CABLES -100003-237) THE FOLLOWING CAPACITORS WILL BE .01UF ± 20%: C12, C13, C33, C34

LABEL 146010-022 CODE 103 5-90050 (P)

STROMBERG-CARLSON
A DIVISION OF GENERAL DYNAMICS CORPORATION
MODEL ASP-80 DUAL CHANNEL POWER AMPLIFIER



NOTES
1-ALL CAPACITORS ARE IN UUF, ±20%, UNLESS OTHERWISE SPECIFIED.
2-ALL RESISTORS ARE IN OHMS, 1/2 WATT, ±10% UNLESS OTHERWISE SPECIFIED, K=1000.
3-ALL VOLTAGES MEASURED TO CHASSIS WITH A VACUUM TUBE VOLTMETER, AT 117 VOLTS, 60 CPS, NO SIGNAL.
4-[ ] INDICATES EQUIPMENT MARKING.
5-IN THE ASR-880 STEREO AMPLIFIER, JACKS J2, J3, J4, & J5 ARE ELIMINATED AND DIRECT WIRING IS USED.

LABEL 146010-023 CODE 104 5-90051 161

INSTALLATION INSTRUCTIONS

1. Remove all packing material from the amplifier.

2. When the amplifier is not installed in a cabinet, insert the enclosed feet in the holes provided in the bottom cover of the chassis and press in the plunger.

3. Stromberg-Carlson provides cables with their record player and tuner to permit connection to the amplifier. Shielded cables with skirted pin connectors for connecting units such as a tape recorder, etc., to the amplifier are available in various lengths from your dealer, if not supplied with the unit.

4. In the instructions which follow, ignore reference to any equipment that is not being installed at this time.

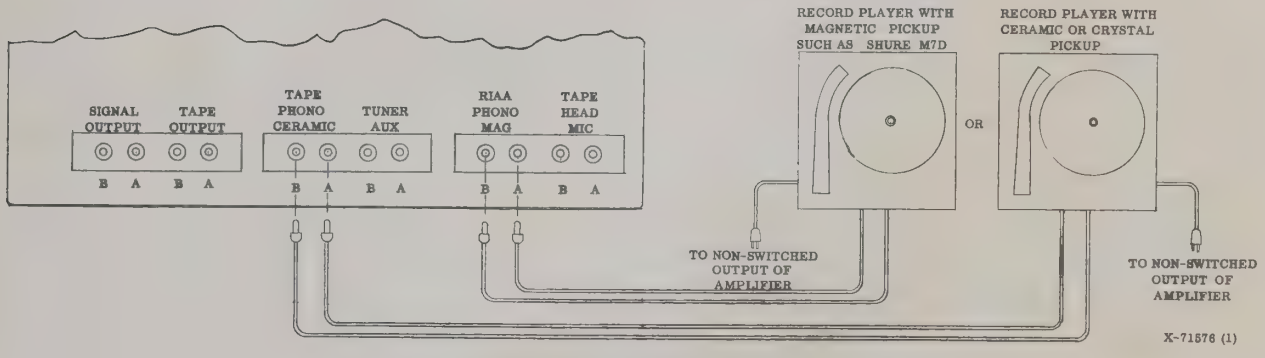


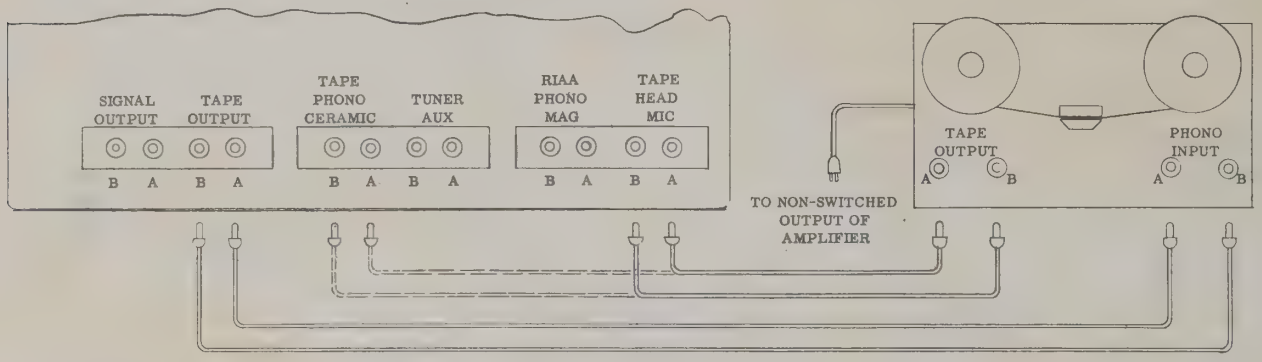
FIGURE 1 RECORD CHANGER CONNECTIONS

5. Stereo Record Player Connections - (a) When a magnetic or variable reluctance stereo pickup is used, insert the single-pin connector for the left channel into the RIAA PHONO MAG A input of the preamplifier. Insert the other single-pin connector into the RIAA PHONO MAG B input. (b) When a ceramic or crystal stereo pickup is used, insert the single-pin connector for the left channel into TAPE PHONO CERAMIC A input. Insert the other single-pin connector into TAPE PHONO CERAMIC B. (c) Insert the power plug for the record player into the NON-SWITCHED power outlet on the back of the amplifier or a wall electric outlet.

6. Monophonic Record Player Connections - (a) When the record player or changer is equipped for monophonic records only, insert the single-pin connector into the RIAA PHONO MAG A input when a magnetic or variable reluctance pickup is used; into the TAPE PHONO CERAMIC A input when a ceramic or crystal pickup is used (no connection to RIAA PHONO MAG B or TAPE PHONO CERAMIC B). (b) Insert the power plug from the record player into the NON-SWITCHED power outlet on the back of the amplifier or a wall electric outlet.

SPECIAL PRODUCTS DIVISION
STROMBERG-CARLSON
A DIVISION OF GENERAL DYNAMICS

7. Stereo Tape Recorder Connections - Most tape units equipped for stereo provide two shielded output cords terminated at one end in a plug to fit the tape unit and at the other end in a skirted single-pin connector to fit the amplifier. When not supplied, these cords are available at your dealer. (a) Tape recorders and tape decks equipped for recording as well as playback usually have a built-in recording and playback preamplifier. Using two of the cords described in the previous paragraph, connect one of the playback preamplifier outputs (left channel) of a stereo tape recorder or deck to TAPE PHONO CERAMIC A input, the other (right channel) to TAPE PHONO CERAMIC B input. (b) Tape heads and some tape decks equipped only for playback from pre-recorded tapes, often do not have a built-in preamplifier. Using the cords described above, connect one of the outputs (left channel) of a stereo tape head to TAPE HEAD MIC A input and the other to TAPE HEAD MIC B input. (c) When the tape recorder provides stereo recording as well as playback, connect TAPE OUTPUT A and TAPE OUTPUT B amplifier outputs to the tape recorder stereo inputs usually marked "Phono Input". This connection permits tape recording of the program being reproduced by the amplifier and speakers. (d) Insert the power cord from the tape unit into the NON-SWITCHED power outlet on the back of the amplifier or a wall electric outlet.



X-71577 (1)

FIGURE 2 TAPE CONNECTIONS

8. Monophonic Tape Recorder Connections - Tape units equipped for monophonic use only are provided with one output jack and cord, otherwise considerations are the same as outlined for a stereo tape unit. (a) When the tape unit is equipped with a built-in preamplifier, refer to paragraph 7 (a), connect the preamplifier output to TAPE PHONO CERAMIC A; no connection to TAPE PHONO CERAMIC B. (b) When the tape unit is not equipped with built-in preamplifier, refer to paragraph 7 (b), connect the output of a tape head to TAPE HEAD MIC A; no connection to TAPE HEAD MIC B. (c) When the tape unit provides for recording as well as playback, connect TAPE OUTPUT A to the tape recorder input usually marked "Phono Input"; no connection to TAPE OUTPUT B. (d) Insert the two-prong power cord from the tape unit into the NON-SWITCHED power outlet on the back of the amplifier or a wall electric outlet.

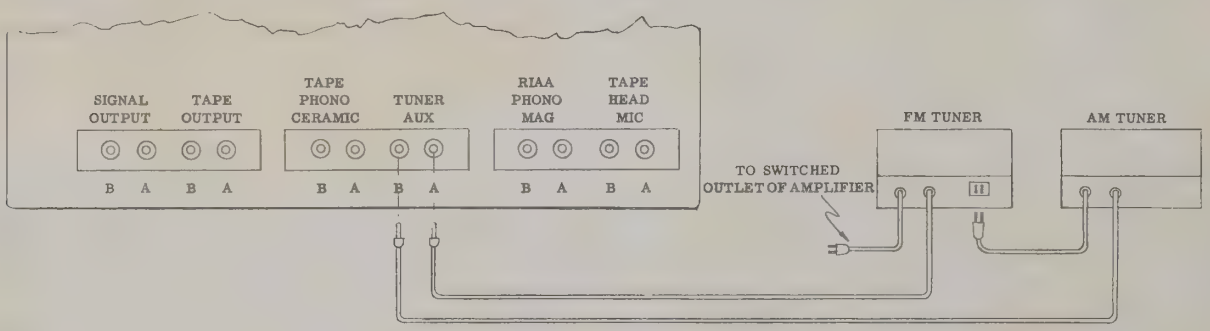


FIGURE 3 TUNER CONNECTIONS

X-71578 (1)

9. Radio Tuner Connections, Monophonic Use - Insert the power plug of the tuner into the SWITCHED power outlet on the back of the amplifier. Insert one of the skirted, single-pin connectors into the audio output of the tuner. Insert the single-pin connector at the other end of this cord into TUNER A input on the amplifier. When the CHANNEL SELECTOR is operated to MONO, and two loudspeaker systems are used, the radio program will be heard over both loudspeaker systems.

Radio Tuner Connections, Stereo Use - When a stereo radio transmission is available in your area, connect the output of the FM tuner to the TUNER A input. Connect the AM tuner output to TUNER B input. During operation both tuners can be selected by operating PROGRAM SELECTOR to TUNER, CHANNEL SELECTOR to STEREO. The FM portion of the stereo program will be heard from the left loudspeaker system, the AM portion from the right loudspeaker system. Connect AM to TUNER A and FM to TUNER B to reverse outputs.

10. Auxiliary Program Sources - When a radio tuner is not connected to the TUNER AUX jacks, an equivalent level audio signal (such as the detector output of a television receiver) can be connected in the manner described in step 9. Note: When the program source exceeds 1 volt, either attenuate the signal for a maximum of 1 volt; or do not operate the CHANNEL VOLUME controls above mid-position.

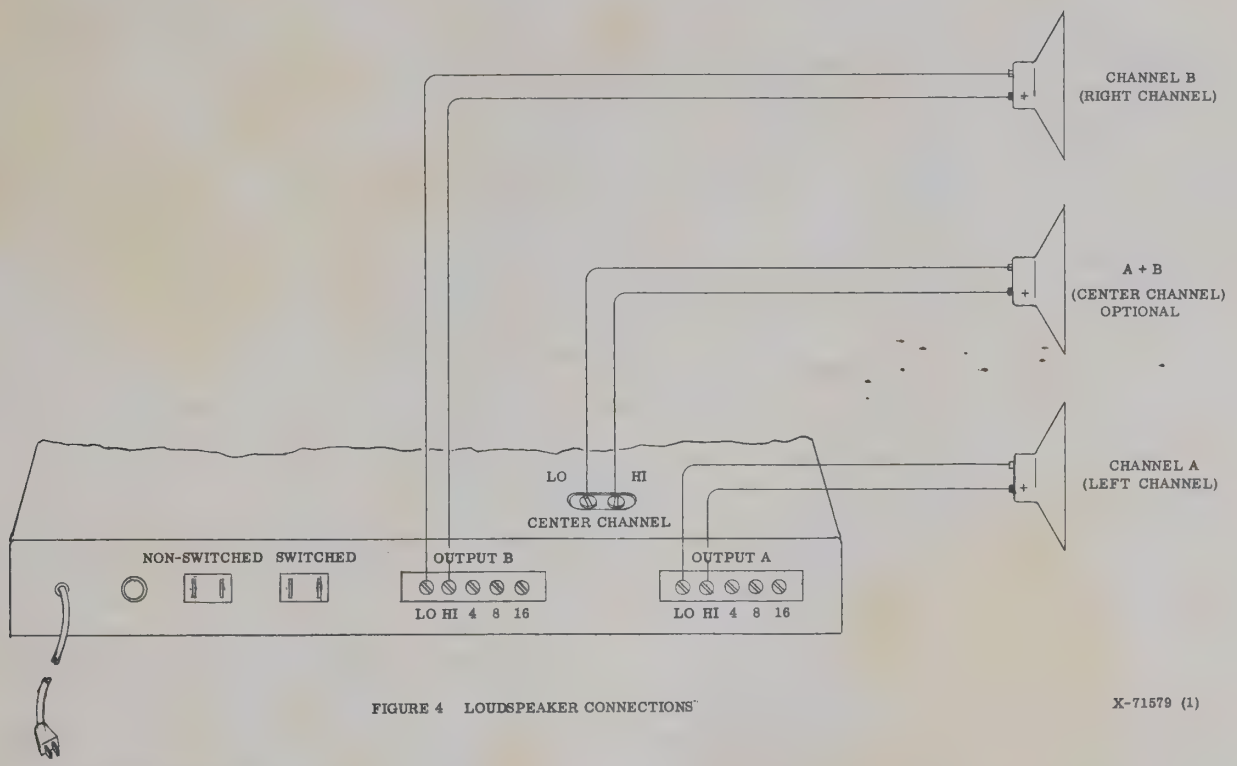
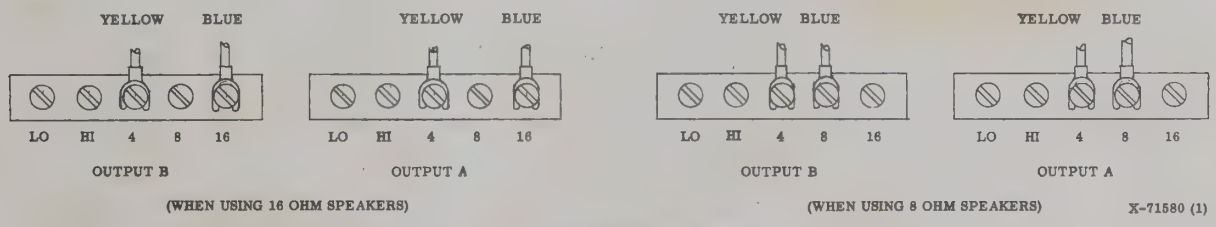


FIGURE 4 LOUDSPEAKER CONNECTIONS

X-71579 (1)

11. Loudspeaker Connections - Use plastic or rubber covered lamp cord for making the connections. (a) Connect the positive terminal (usually coded red or +) of the left loudspeaker (as viewed by the listener) to the HI terminal of OUTPUT A by loosening the terminal screw, wrapping the wire around the screw and tightening the screw securely. Connect the negative terminal (usually coded black or -) of the left loudspeaker to the LO terminal of OUTPUT A. Make sure all of the wire "whiskers" are touching only the terminal to which they are connected. (b) Connect the right loudspeaker to OUTPUT B as outlined above.



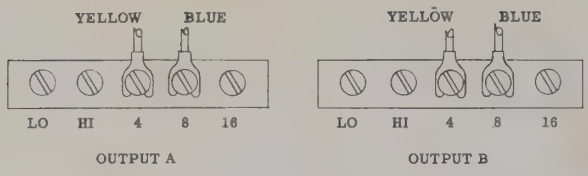
X-71580 (1)

FIGURE 5 JUMPER CONNECTIONS

12. Jumper Arrangement - Refer to figure 5. When using 16 ohm loudspeakers, connect the jumpers in the following manner: (a) At OUTPUT A terminal board, connect the blue jumper to 16 and the yellow jumper to 4. (b) At OUTPUT B terminal board, connect the blue jumper to 16 and the yellow jumper to 4.

When using 8 ohm loudspeakers, connect the jumpers in the following manner: (a) At OUTPUT A terminal board, connect the blue jumper to 8 and the yellow jumper to 4. (b) At OUTPUT B terminal board, connect the blue jumper to 8 and connect the yellow jumper to 4.

When using 4 ohm loudspeakers, connect the jumpers in the following manner: (a) At OUTPUT A terminal board, connect the blue and yellow jumpers to 4. (b) At OUTPUT B terminal board, connect the blue and yellow jumpers to 4.



X-71585 (1)

FIGURE 6 CENTER CHANNEL JUMPER CONNECTIONS

13. Center Channel - A third loudspeaker or loudspeaker system can be connected to provide a third channel or center channel. CHANNEL A plus CHANNEL B program material will be heard from the center channel at a somewhat reduced volume level. This method fills in an apparent "hole in the center" when the left and right loudspeakers are located an appreciable distance apart or when they are located at the corners of the room.

Loudspeaker Connections - (a) Connect the jumpers as shown in figure 6 when using either 4 ohm, 8 ohm or 16 ohm loudspeakers. Connect the positive terminal of the loudspeaker to the CENTER CHANNEL HI terminal of the amplifier. Connect the negative terminal of the loudspeaker to the CENTER CHANNEL LO terminal of the amplifier.

When the center channel is too loud and overrides the other two channels, a volume level control can be installed as illustrated in figure 6.

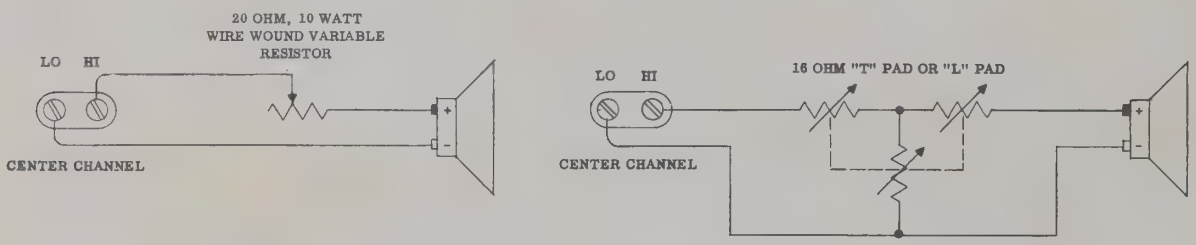


FIGURE 7 CENTER CHANNEL LEVEL CONTROL X-71584 (1)

14. Connection to AC Power - Insert the ac power plug from the amplifier into a wall electric outlet. Check to see that the ac power plugs from the tuner, tape recorder, record player, etc. are connected.

15. Loudspeaker Phasing - When the two loudspeaker systems are connected as outlined in paragraph 11, the loudspeakers are in phase. However, if the polarity of the loudspeakers is unknown the following procedure is recommended: (a) Operate the amplifier by positioning the controls as follows: MASTER GAIN to 5; TREBLE and VOLUME to mid-position; BASS to full clockwise rotation; CHANNEL SELECTOR to STEREO; BALANCE SIGNAL to IN; all other slide switches to the left. (b) Place the two loudspeaker systems about 2 feet apart facing each other. (c) Now operate PHASING switch to OUT. If the volume of the pulsed signal decreases (especially at the low frequencies) reverse the leads to one of the loudspeaker cabinets. Return the PHASING switch to the IN position.

The loudspeakers are in phase when maximum volume at the low frequencies is obtained when the PHASING switch is in the IN position.

16. Stereo Speaker Placement - The exact placement of loudspeakers for stereo reproduction is dependent on the size of the room and its furnishings. The loudspeakers should be installed and then varied to provide the optimum stereo effect. The following suggestions provide a starting point for loudspeaker placement. (a) In a square room, divide the wall on which the loudspeakers are to be placed into three equal parts. Center the loudspeaker cabinets on the two dividing lines. (b) In an oblong or rectangular shaped room, the loudspeaker cabinets should be placed on the smaller wall, closer to the corners.

17. Stereo Channel Balance - Note: The full stereo effect will be obtained only when the sound level of the two loudspeaker systems is in balance. When this balance is achieved, the program will no longer appear to be entering the room through a hole with a loudspeaker behind it. Rather, the entire side of the room will become a stage and the individual performer will seem to be on the right or left of the room or in the center or in all of these portions simultaneously depending on the original placement of the performers. Sound will not jump from one loudspeaker to the other but instead will blend into the overall illusion of presence and depth previously heard only in live performances.

Only a listening test can provide optimum balance of the loudspeaker systems. Meters and other indicating devices fail to compensate for differences in sound absorption (due to the different placement of the two loudspeakers), difference in loudspeaker sensitivity, etc. The most satisfactory method of balancing the two loudspeakers for stereo reproduction follows. (a) Operate all slide switches to the left; VOLUME controls to full counter-clockwise position; BASS and TREBLE controls to mid-position; MASTER GAIN CONTROL to 5; CHANNEL SELECTOR to B; PROGRAM SELECTOR to RIAA PHONO MAG.

While playing a stereo recording of an instrumental group, advance CHANNEL B VOLUME control to provide normal listening level from the loudspeaker for this channel (located on the right as viewed by the listener). Note: This adjustment compensates for difference in sensitivity between phono pickups of different manufacture as well as variation in size and sound absorption characteristics of the listening area. In addition this procedure brings the VOLUME and MASTER GAIN controls to the operating position that will result in the correct operation of the loudness compensation circuit. Once the normal setting is established for your installation, it will change only if a change is made in the system or installation. (b) Discontinue playing the record; operate the BALANCE SIGNAL to IN (all other slide switches to the left). A pulsed test signal will be heard from the right loudspeaker system. (c) Operate CHANNEL SELECTOR to STEREO and adjust CHANNEL A VOLUME until the signal appears (to a person in the normal listening area) to originate midway between the two loudspeaker systems. (d) Leave CHANNEL A and CHANNEL B VOLUME controls in this position; operate BALANCE SIGNAL to OUT. (e) Operate the system as outlined in Operating Instructions using the MASTER GAIN CONTROL to adjust volume.

18. Radio Tuner or Tape Machine Volume Adjustment - The correct settings of volume controls on radio tuners or tape machines (with amplified output) should be established at installation.

Adjust the Volume and Gain controls as outlined under STEREO CHANNEL BALANCE above. Operate the PROGRAM SELECTOR to the appropriate input. (a) Radio Tuner - Tune in a nearby station and adjust the volume control on the tuner to provide a slightly louder than normal listening level from the loudspeakers. Leave the tuner volume control in the position and hereafter use the MASTER GAIN CONTROL to adjust volume.

If your tuner is not equipped with a volume control, but is equipped with a LOCAL-DISTANT SWITCH, use the LOCAL position at all times except when the signal strength is too low to provide adequate loudness with the MASTER GAIN at maximum position.

If the output of the tuner exceeds 1 volt; either attenuate the signal for a maximum of 1 volt using the volume control of the tuner; or do not operate the CHANNEL VOLUME control above the mid-position.

(b) Tape Machine - Operate PROGRAM SELECTOR to TAPE. Operate tone controls on the tape machine to provide flat response. While playing a good tape, adjust the volume control on the tape machine to provide a listening level from the loudspeakers that is slightly higher than normal. Leave the tape machine controls in this position and use the MASTER GAIN CONTROL on the amplifier to control volume.

SERVICE NOTES

Under normal operating conditions the only maintenance required by this amplifier is a yearly tube check. CAUTION: Do not replace tubes when the amplifier is energized.

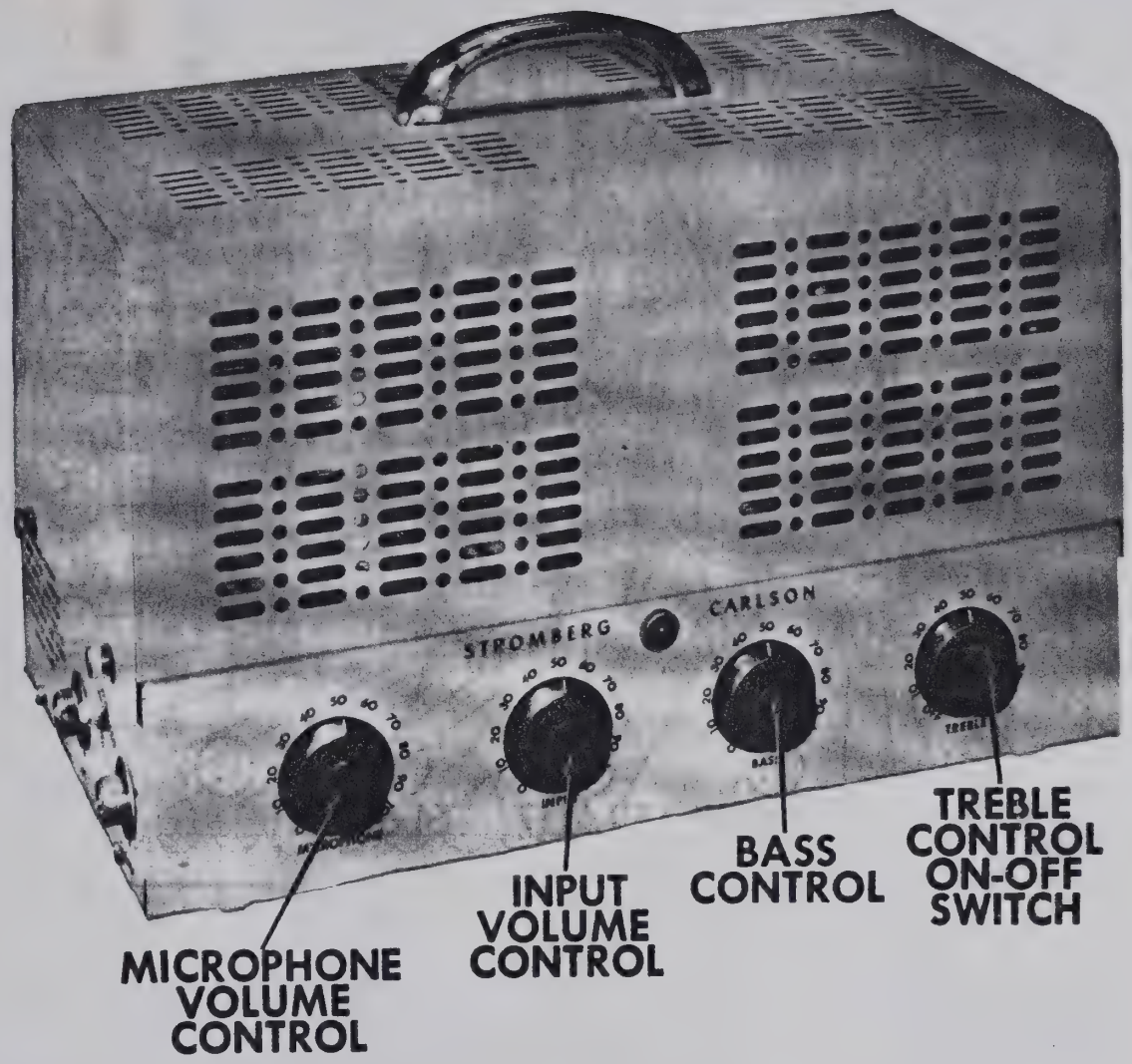
The preamplifier tubes (type 7025) have series-connected dc filaments for low-noise operation. If the filament of one of these tubes is open, the other three will not light. Isolate the defective tube by substitution.

The BIAS and BALANCE controls have been adjusted for optimum performance and sealed at the factory. The output tubes (type 7355) can be replaced without readjusting these controls.

The method of adjusting the BIAS and BALANCE controls is outlined in the Repair Data Sheet for the ASR-8 · 80, Instruction Sheet #146013-030, available from the factory. These controls can be adjusted by qualified technicians only, using proper test equipment. These adjustments should be made for critical measurement or evaluation of the amplifier.

STROMBERG-CARLSON MODEL AU-58

STROMBERG-CARLSON MODEL AU-58



STROMBERG-CARLSON MODEL AU-58

TRADE NAME	Stromberg-Carlson Model AU-58
MANUFACTURER	Stromberg-Carlson Co., Sound Div., 1225 Clifford Ave., Rochester 21, N. Y.
TYPE SET	AC Operated 2 Channel Audio Amplifier
TUBES (Seven)	Types (2) 6AU6 Preamp., 12AU7 AF Amp., 12AU7 AF Amp-Phase Inv., (2) 6L6GT Output, 5U4G Rectifier
POWER SUPPLY	110-120 Volts AC - 60 Cycles RATING .9 Amp. @ 117 Volts AC

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana

PARTS LIST AND DESCRIPTIONS

STROMBERG-CARLSON MODEL AU-58

TUBES (SYLVANIA, GENERAL ELECTRIC, WESTINGHOUSE)

ITEM No.	USE	REPLACEMENT DATA: Stromberg-Carlson PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RETMA BASE TYPE	NOTES
V1	Channel #1 Preamp.	6AU6	6AU6	7BK	
V2	Channel #2 Preamp.	6AU6	6AU6	7BK	
V3	AF Amp.	12AU7	12AU7	9A	
V4	AF Amp. - Phase Inverter	12AU7	12AU7	9A	
V5	Output	6L6GT	6L6GT	7S	
V6	Output	6L6GT	6L6GT	7S	
V7	Rectifier	5U4G	5U4G	5T	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

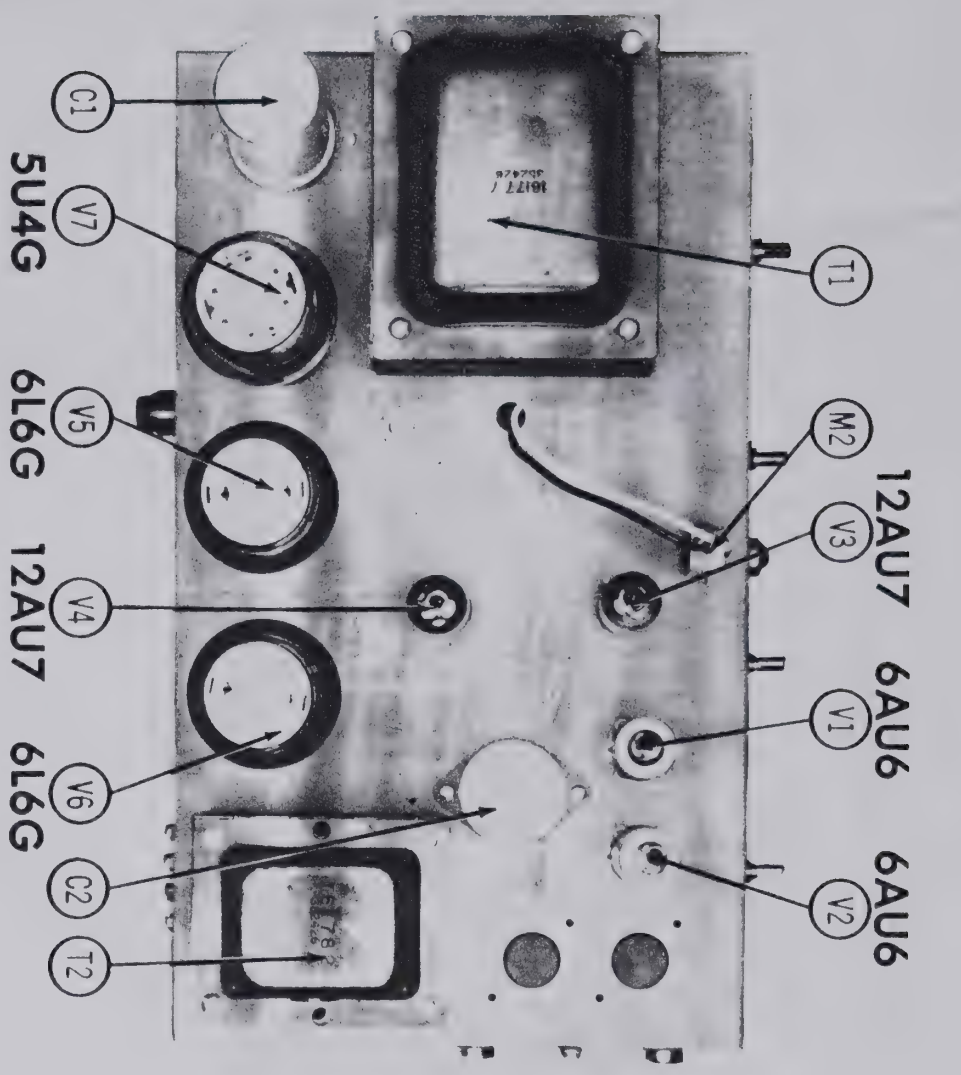
ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: Stromberg-Carlson PART No.	CENTRALAB PART No.	ERIE PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	
C1A	▲30	500				FP284	TM-D40-500	D-275	
B	■30	500							
C2A	■30	300				FP376.9	TM-403020-450	Q-050	
B	▲15	350				TC39	TD-50-50	FM-0550	
C	▲40	450							
D	50	50							
C3	50	6				TC29	TD-50-6	MMT-650	
C4	50	6				TC29	TD-50-6	MMT-650	
C5	50	6				TC29	TD-50-6	MMT-650	
C6	.1	200		DF-104		PT401	IMP2-P1	330201	Note 1
C7	.047	400		DF-503		PT4147	IMP4-S47	3304147	
C8	100			D6-101	GP1K-101	UC-531		K-1310	
C9	220			D6-221	GP2K-221	UC-5322		K-1322	
C10	.1	200		DF-104		PT401	IMP2-P1	330201	Note 1
C11	.047	400		DF-503		PT4147	IMP4-S47	3304147	
C12	470			D6-471	GP2K-471	UC-5347		K-1347	
C13	.022	200		DF-203	817-02	PT4122	IMP4-S22	3304122	
C14	.1	400		DF-104		PT401	IMP4-P1	330401	
C15	470			D6-471	GP2K-471	UC-5347		K-1347	
C16	.22	400				PT4022	IMP4-P22	3304022	
C17	.047	400		DF-503		PT4147	IMP4-S47	3304147	
C18	.047	400		DF-503		PT4147	IMP4-S47	3304147	
C19	.01	600		D6-103	GP2-333-103	PT611	IMP6-S1	330611	

① Some versions use .15MFD in this application.

CONTROLS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: Stromberg-Carlson PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1Meg	½	46313	Q13-137	A47-1Meg-Z	B-70	U-53	Microphone Volume
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Not Req.	Attach to R1A
R2A	1Meg	½	46313	Q13-137	A47-1Meg-Z	B-70	U-53	Input Volume
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Not Req.	Attach to R2A
R3	5Meg	½	46314	Q17-141				Bass
R4A	50KΩ	½	145629	Q11-123	A47-50K-S	B-31-S	U-35	Treble
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Not Req.	Attach to R4A
C	Switch		Not Req.	76-1	SWE-12	Not Req.	U8-26	Attach to R4A
R5A	100Ω	2		W-100	A43-100	VK-121	C100P	Hum Balance
B	Shaft			Not Req.	FKS-1/4	Not Req.	Not Req.	Attach to R5A

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

ITEM No.	RATING OHMS	RATING WATT	REPLACEMENT DATA Stromberg-Carlson PART No.	REPLACEMENT DATA IRC PART No.	NOTES
R6	1Meg	½		BTS-1Meg	
R7	15KΩ	½		BTS-15K	
R8	1Meg	½		BTS-1Meg	
R9	2700Ω	½		BTS-2700	
R10	1.5Meg	½		BTS-1.5Meg	
R11	470KΩ	½		BTS-470K	
R12	1.5Meg	½		BTS-1.5Meg	
R13	47KΩ	½		BTS-47K	
R14	180KΩ	½		BTS-180K	
R15	150KΩ	½		BTS-150K	
R16	1Meg	½		BTS-1Meg	
R17	2700Ω	½		BTS-2700	
R18	1.5Meg	½		BTS-1.5Meg	
R19	100KΩ	½		BTS-100K	
R20	180KΩ	½		BTS-180K	
R21	47KΩ	½		BTS-47K	
R22	180KΩ	½		BTS-180K	
R23	2200Ω	½		BTS-2200	
R24	2.7Ω	1			

ITEM No.	RATING OHMS	RATING WATT	REPLACEMENT DATA Stromberg-Carlson PART No.	REPLACEMENT DATA IRC PART No.	NOTES
R25	180KΩ	½		BTS-180K	
R26	150KΩ	½		BTS-150K	
R27	2200Ω	½		BTS-2200	
R28	47KΩ	½		BTS-47K	
R29	4700Ω	½		BTS-4700	
R30	150KΩ	½		BTS-150K	
R31	3900Ω	½		BTS-3900	
R32	150KΩ	½		BTS-150K	
R33	12KΩ	½		BTS-12K	
R34	150KΩ	½		BTS-150K	
R35	10KΩ	½		BTS-10K	
R36	150KΩ	½		BTS-150K	
R37	250Ω	10		1 3/4A-250	
R38	150KΩ	½		BTS-150K	
R39	39KΩ	½		BTS-39K	
R40	10KΩ	1		BTA-10K	
R41	5000Ω	10		1 3/4A-5000	
R42	100KΩ	2		BTB-100K	

TRANSFORMER (POWER)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	RATING SEC. 3	REPLACEMENT DATA Stromberg-Carlson PART No.	Stancor PART No.	Merit PART No.	Triad PART No.	Halldorson PART No.	Thordarson PART No.
T1	125V Tap @ 117V @ .9A	674VCT .112ADC	5VAC @ 3A	6.3VAC @ 1A SEC. 4 6.3VAC @ 2.1A	161777					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA Stromberg-Carlson PART No.	Stancor PART No.	Merit PART No.	Triad PART No.	Halldorson PART No.	Thordarson PART No.	NOTES
T2	6.2KΩ CT	70V* SEC. 2 4.64Ω RES	161782						

* Tapped @ 35V., 25V., 16Ω, 8Ω and 4Ω.

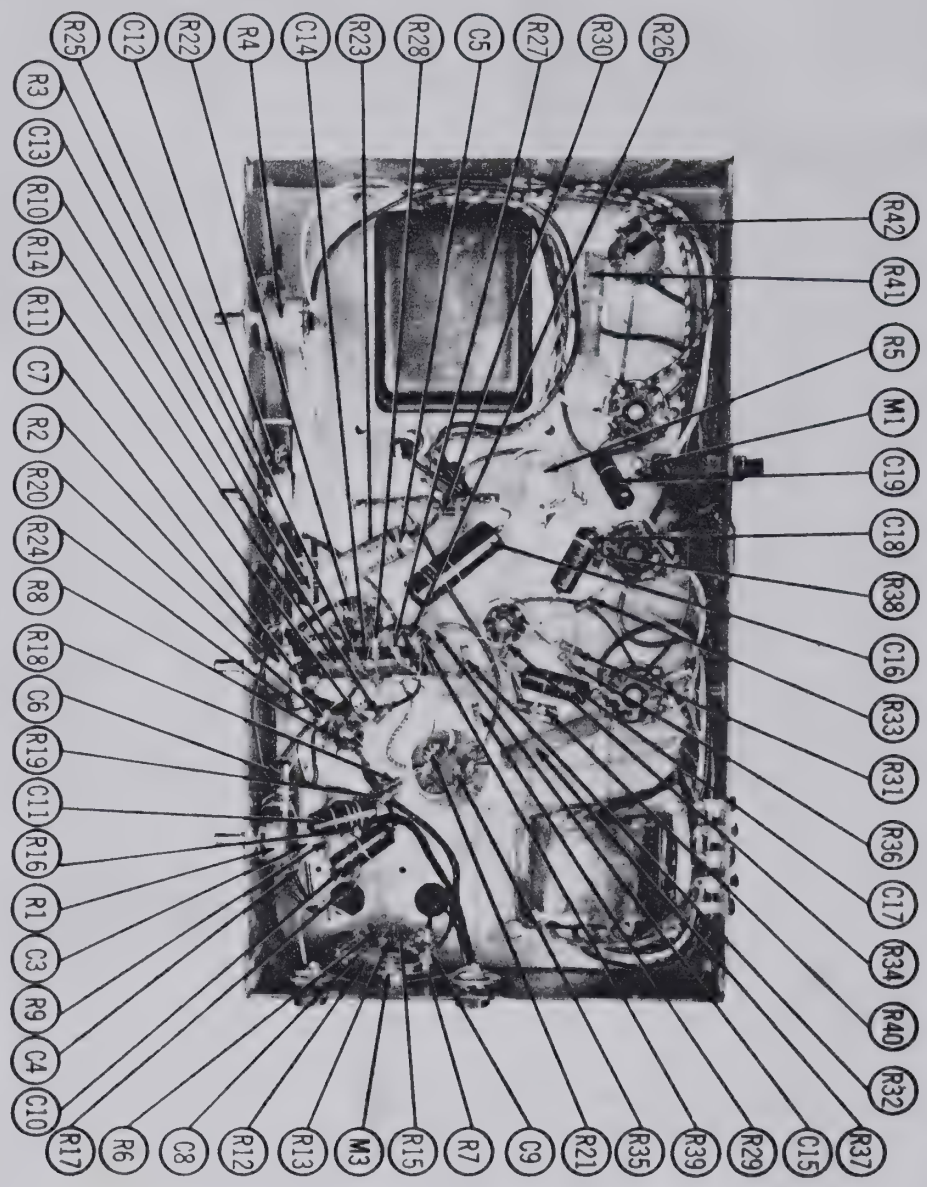
FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA Stromberg-Carlson PART No. FUSE	Stromberg-Carlson PART No. HOLDER	LITTELFUSE PART No. FUSE	LITTELFUSE PART No. HOLDER	BUSS PART No. FUSE	BUSS PART No. HOLDER
M1	3AG	3A 250V			312003 (3AG-3A)	342001	AGC3	HKP

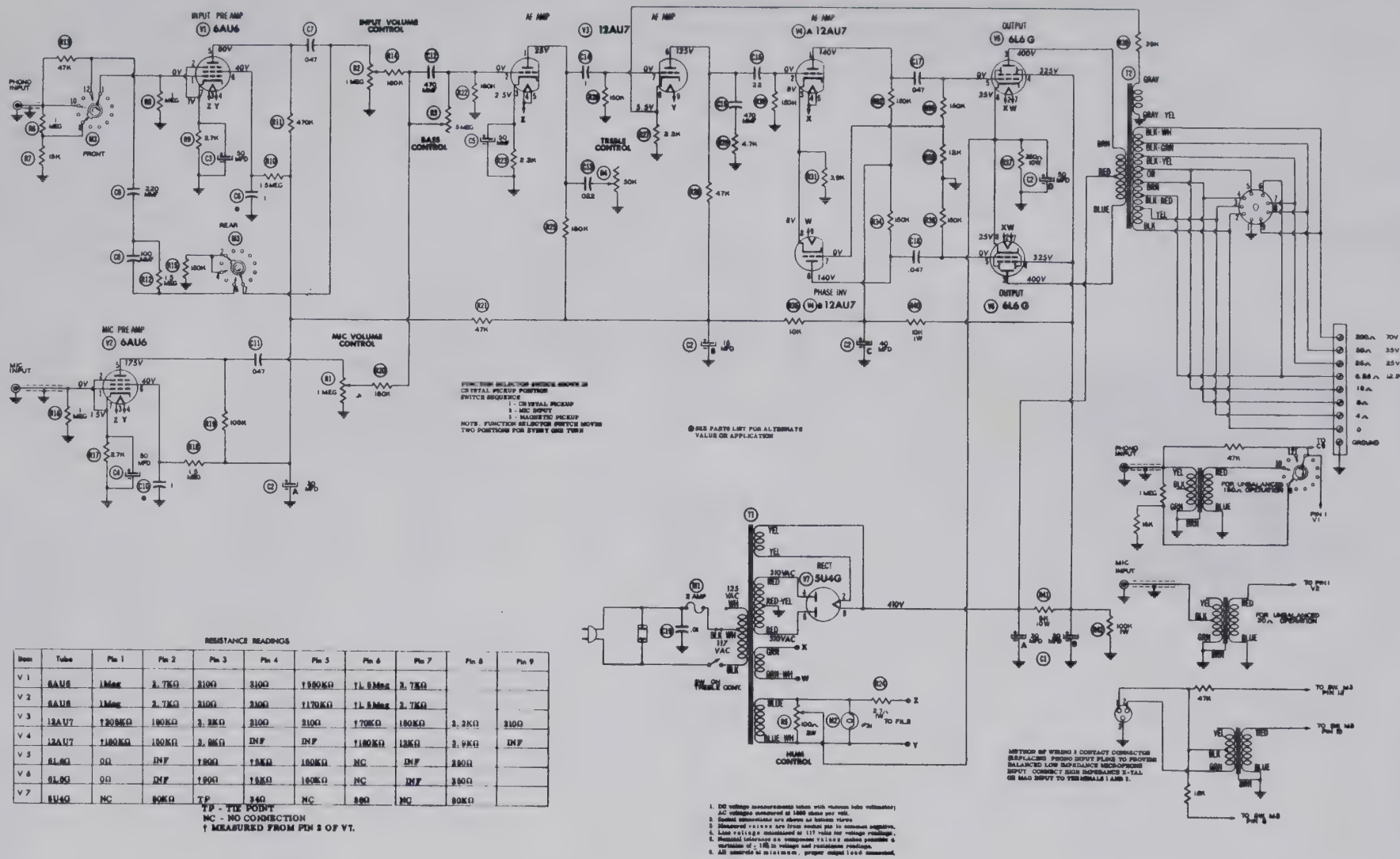
MISCELLANEOUS

ITEM No.	PART NAME	Stromberg-Carlson PART No.	NOTES
M2	Pilot Light		#51, Bayonet
M3	Switch		Selector - XTAL, MIC, MAG (Rotary-Wafer Type)

CHASSIS—BOTTOM VIEW



STROMBERG-CARLSON MODEL AU-68



CR CRYSTAL PICKUP POSITION
SWITCH SEQUENCE
1 - CRYSTAL PICKUP
2 - MIC INPUT
3 - MAGNETIC PICKUP
NOTE: FUNCTION SELECTOR SWITCH MOVES TWO POSITIONS FOR EVERY ONE TURN

● SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

METHOD OF WIRING 3 CONTACT CONNECTOR (REPLACING PHONO INPUT PLUG TO PROVIDE BALANCED LOW IMPEDANCE MICROPHONE INPUT. CONNECT HIGH IMPEDANCE X-TAL OR MAG INPUT TO TERMINALS 1 AND 2.

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	6AU6	1Meg	2.7KΩ	210Ω	210Ω	↑980KΩ	↑1.8Meg	2.7KΩ		
V 2	6AU6	1Meg	2.7KΩ	210Ω	210Ω	↑170KΩ	↑1.8Meg	2.7KΩ		
V 3	12AU7	↑208KΩ	180KΩ	2.2KΩ	210Ω	210Ω	↑70KΩ	180KΩ	2.2KΩ	210Ω
V 4	12AU7	↑180KΩ	180KΩ	2.2KΩ	INF	INF	↑180KΩ	12KΩ	2.2KΩ	INF
V 5	6L6G	0Ω	INF	↑90Ω	↑5KΩ	160KΩ	NC	INF	250Ω	
V 6	6L6G	0Ω	INF	↑90Ω	↑5KΩ	160KΩ	NC	INF	250Ω	
V 7	5U4G	NC	80KΩ	TP	360	NC	360	NC	80KΩ	

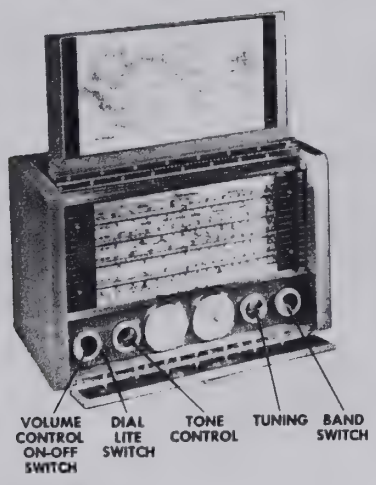
TP - TIE POINT
NC - NO CONNECTION
↑ MEASURED FROM PIN 2 OF V1.

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ± 10% in voltage and resistance readings.
6. All controls at minimum, proper output load connected.

STROMBERG-CARLSON MODEL AWP-8

MEZZANINE

STROMBERG-CARLSON MODEL AWP-8



TRADE NAME	Stromberg-Carlson Model AWP-8
MANUFACTURER	Stromberg-Carlson Co., Service Dept., 1700 University Ave., Rochester 10, N.Y.
TYPE SET	Three Power Portable Multi-band AM Superheterodyne Receiver
TUBES (Six)	Types 1U4 RF Amp., 1L6 Converter, 1U4 IF Amp., 1U5 Det.-AVC-AF Amp., 3V4 Output, 50A1 Ballast
POWER SUPPLY	105-125 Volts AC-DC (220 Volts AC-DC Using Adapter) (or) 9 Volts "A" Supply and 90 Volts "B" Supply in Pack Form
RATING	.15 Amp. @ 117 Volts AC (or) 70MA @ 9 Volts DC & 15MA @ 90 Volts DC

TUNING RANGES

BAND 1	Broadcast 540-1600KC	BAND 5	31 Meters 9.22-10.4MC
BAND 2	16 Meters 17.32-18.4MC	BAND 6	100 Meters 1.8-3.9MC
BAND 3	19 Meters 14.62-15.8MC	BAND 7	50 Meters 3.9-8.0MC
BAND 4	25 Meters 11.42-12.3MC	BAND 8	LONG WAVE NAVIGATION 155-410KC

DISASSEMBLY INSTRUCTIONS

CAUTION—ALWAYS REMOVE CHASSIS FROM FRONT OF CABINET.

A—REMOVING CHASSIS FROM CABINET

1. Remove 4 chassis screws at bottom of cabinet.
2. Remove 2 rubber bumpers inside lower section of front cover.
3. Remove antenna disconnect plugs (loop and whip).
4. Reel in AC line cord.
5. Slide chassis out through front of cabinet.

B—REPLACING CONTROLS

1. Remove chassis as in A above.
2. Remove chassis bottom cover plate (3 snap fasteners at rear of chassis).
3. Remove all 4 knobs.
4. Remove barometer and thermometer by pushing out from rear with finger.
5. Remove two bottom screws and two front snap fasteners holding control panel in place.
6. Remove dial light switch and lift control panel off.

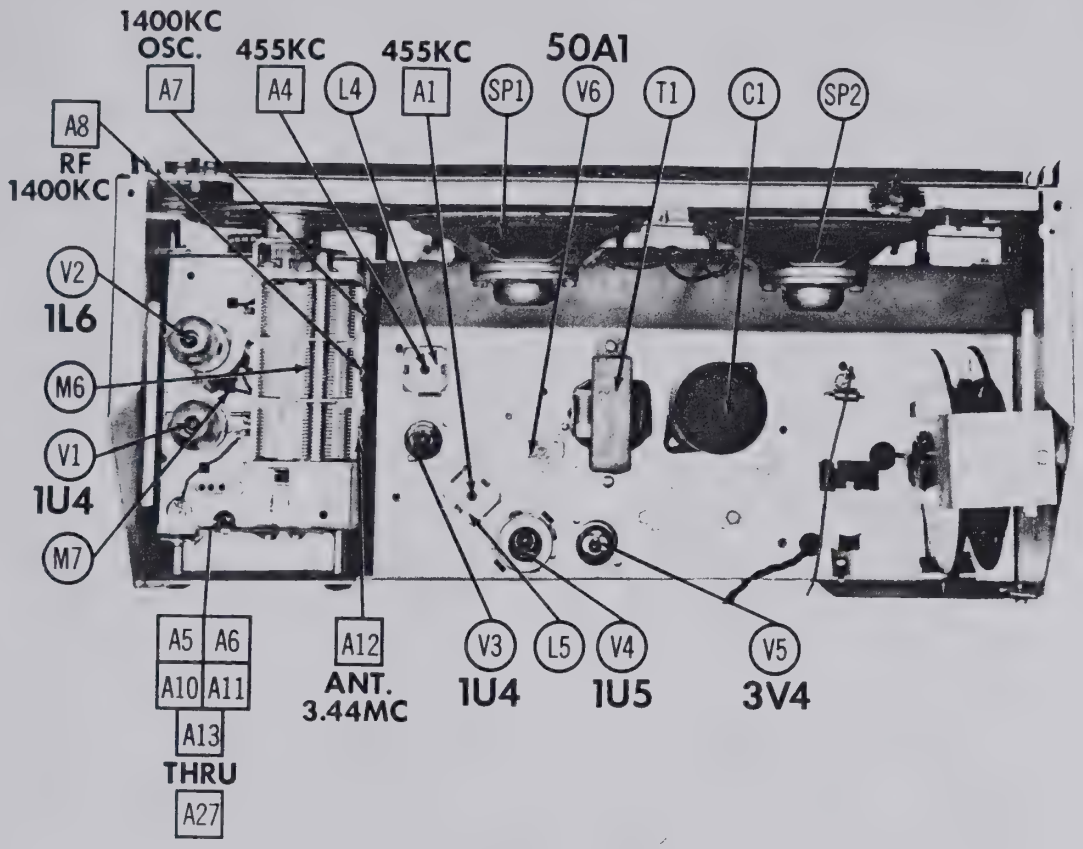
C—REPLACING BAND SWITCH INDICATOR DRIVE CORD

1. Perform A and B above.
2. Remove dial lamps and sockets. (Do not disconnect leads).
3. Remove upper dial trim strip using caution to disengage dial pointer. Set pointer at low frequency end of dial and slide trim strip off to the right. To replace, use the same method.
4. Remove dial end plates (brass) by removing two screws in each plate and sliding plates off towards the outer sides.
5. Remove 5 dial strips. Use thumb pressure to release spring catches.
6. Remove lower dial trim strip. Loosen 4 screws and slide strip upward.
7. Remove bracket and band pointer track and replace drive cord. (See dial stringing diagram).

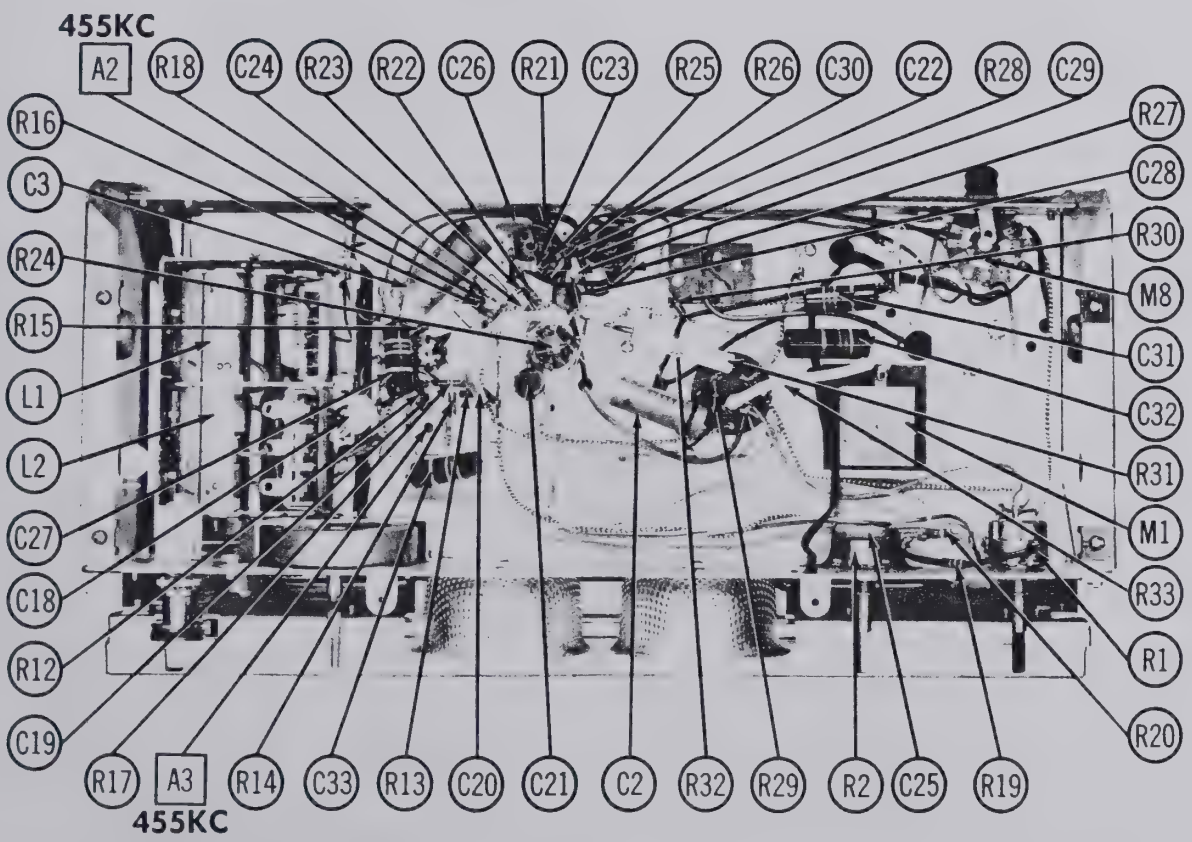
D—REPLACING DIAL AND DRIVE CORD

1. Perform A, B, and C above.
2. Remove 3 metal screws at each end of speaker baffle plate.
3. Carefully move speaker baffle and speakers out of way. It is not necessary to disconnect speaker leads.
4. Re-string dial drive cable. (See dial stringing diagram). Do not re-install dial pointer at this time.
5. Re-assemble front panel less upper dial trim strip.
6. Re-install dial pointer and calibrate.
7. Replace upper dial trim strip as described in item 3 under Replacing Band Switch Indicator Drive Cord.

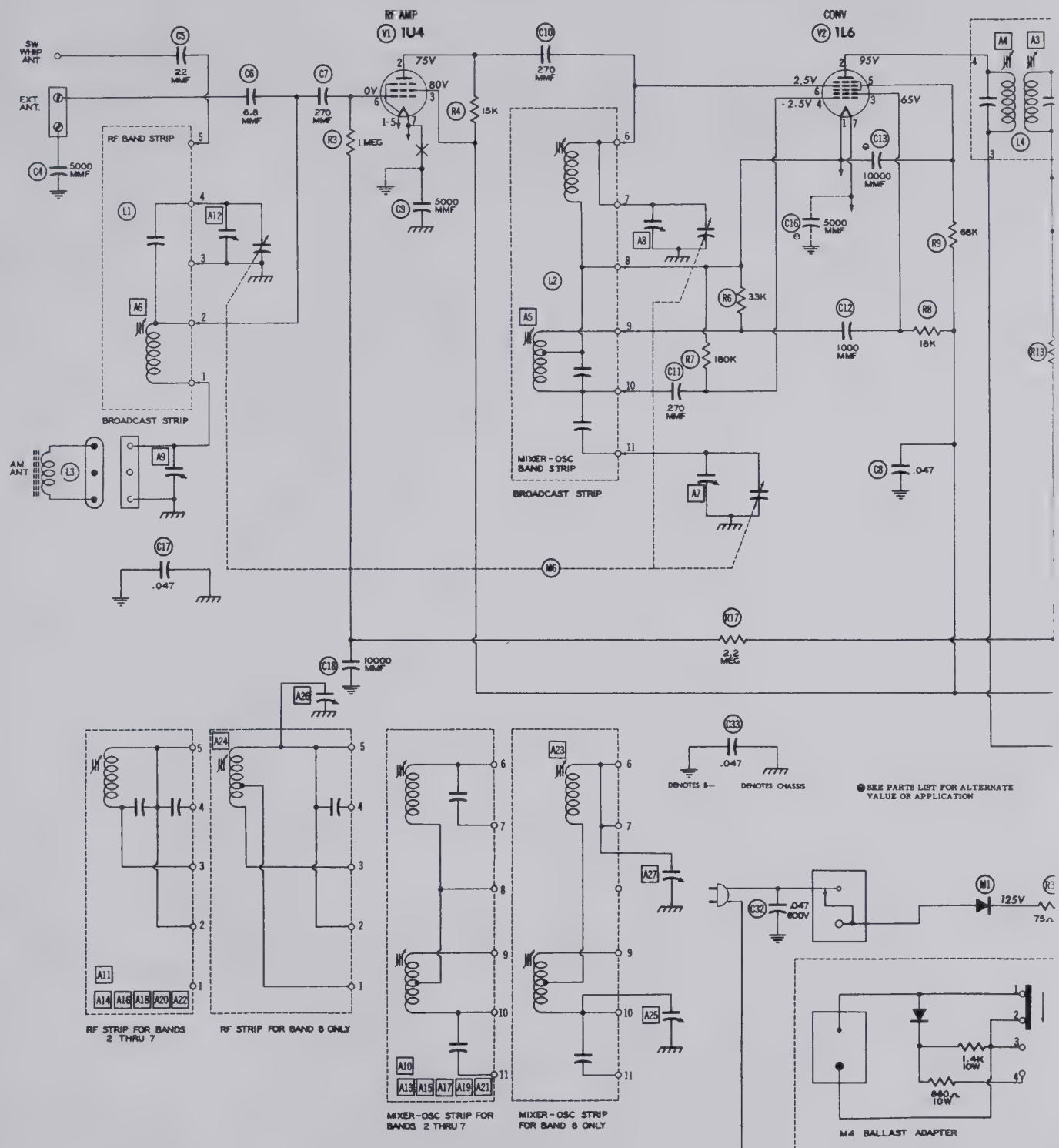
HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana



CHASSIS TOP VIEW



CHASSIS BOTTOM VIEW



RESISTANCE READINGS

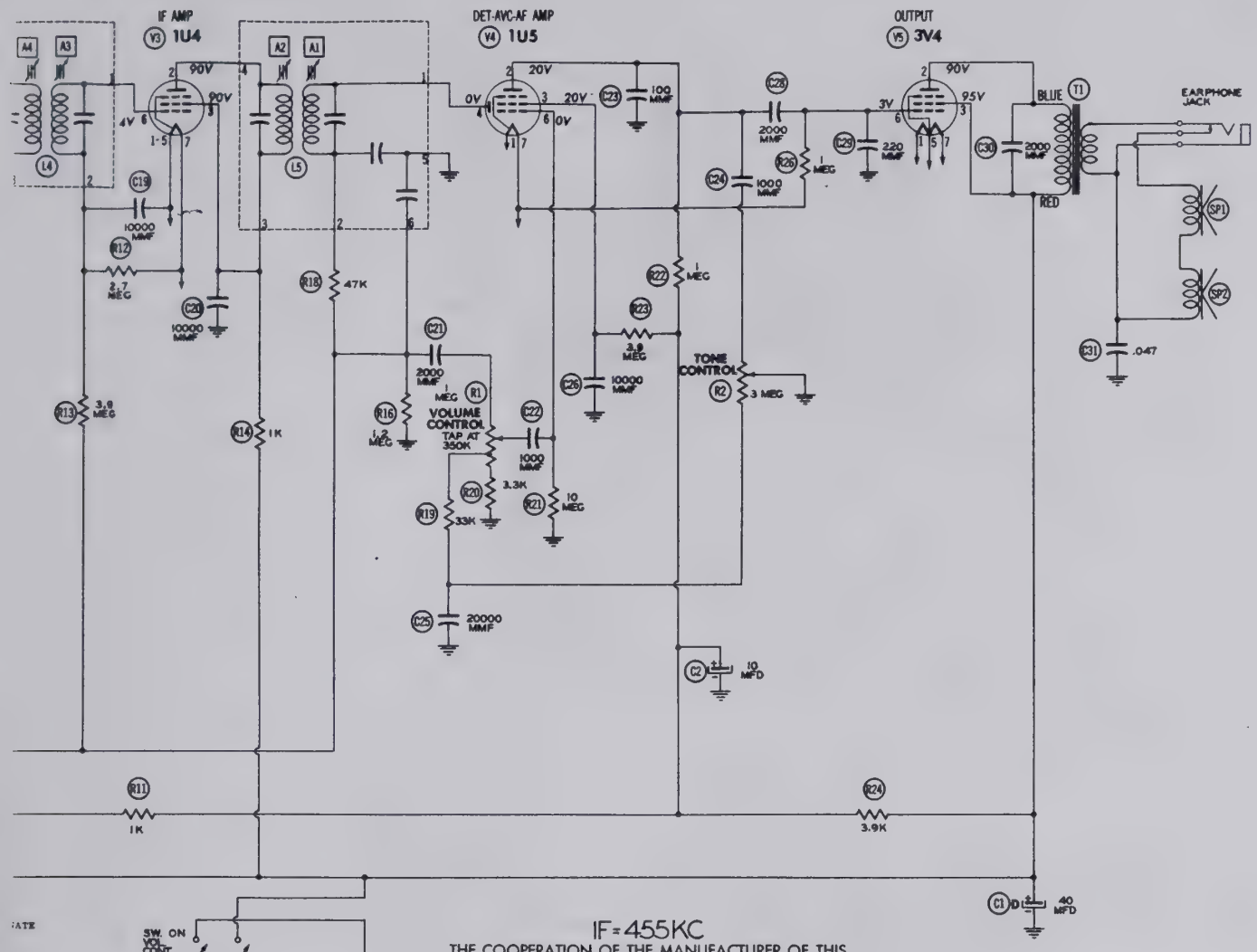
From	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V 1	1U4	•	†2L 8KΩ	†6.9KΩ	NC	•	4.3Meg	•		
V 2	1L6	•	†2KΩ	†24.8KΩ	180KΩ	•	38Ω	•		
V 3	1U4	•	†3KΩ	†3KΩ	NC	•	1.8Meg	•		
V 4	1U5	0Ω	†1Meg	†2.9Meg	1.2Meg	TP	10Meg	•		
V 5	3V4	•	†2.3KΩ	†2K	TP	•	1Meg	•		
V 6	80A1	NC	†78Ω	TP	NC	TP	TP	†280Ω	TP	NC

†MEASURED FROM OUTPUT OF M1.
TP-TIE POINT.
NC-NO CONNECTION.
ALL MEASUREMENTS TAKEN IN BROADCAST POSITION.

* DO NOT USE OHMMETER TO MEASURE FILAMENT RESISTANCE.

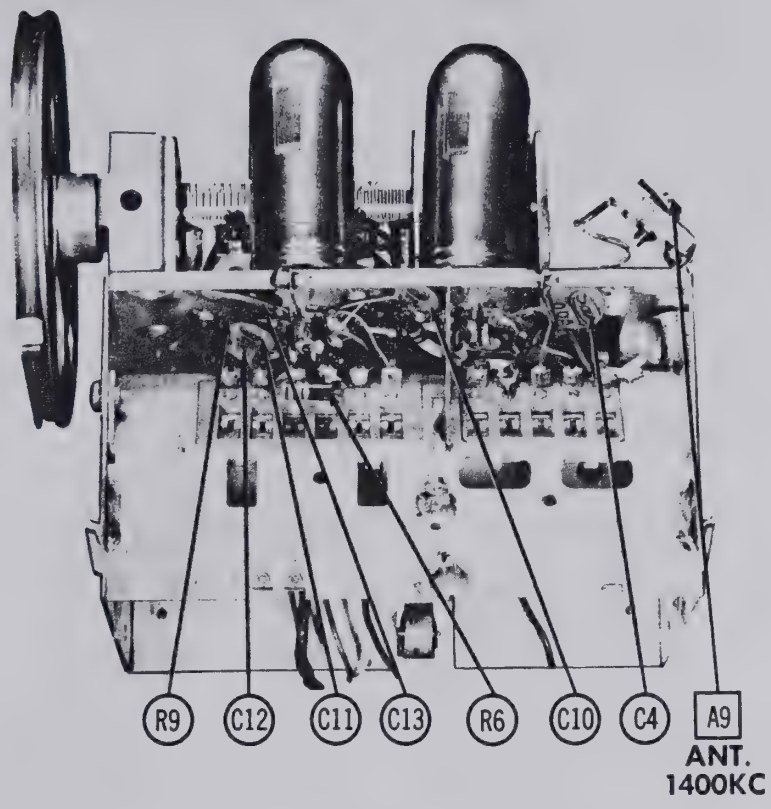
1. DC voltage measureme
AC voltages measured a
2. Socket connections are
3. Measured values are
4. Line voltage maintai
5. Nominal tolerance on
variation of ± 10% in vol
6. Volume control at max
measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

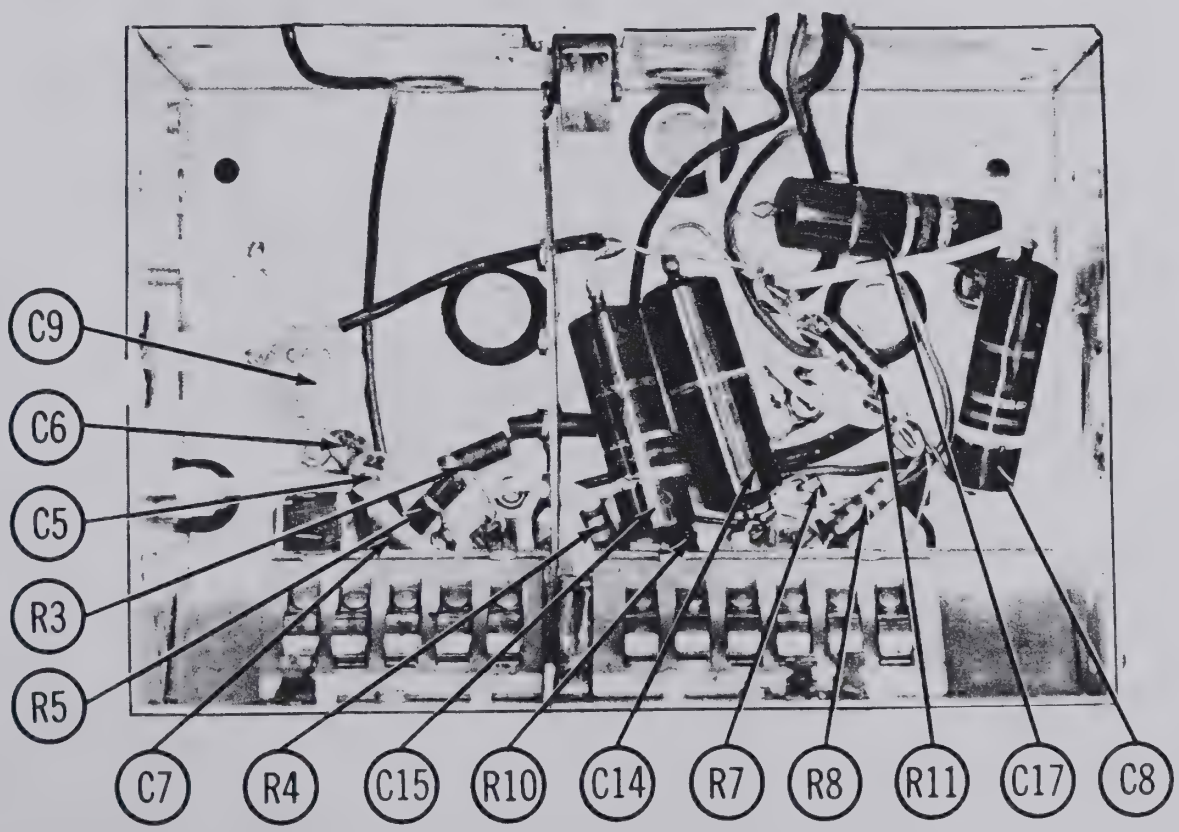


...e measurements taken with vacuum tube voltmeter;
...es measured at 1000 ohms per volt.
...onnections are shown as bottom views.
...values are from socket pin to common negative.
...tage maintained at 117 volts for voltage readings.
...olerance on component values makes possible a
... of ± 15% in voltage and resistance readings.
...control at maximum, no signal applied for voltage
...ments.

307-14



RF TUNER-LEFT SIDE



RF TUNER-BOTTOM VIEW

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.
Use isolation transformer, if available. If not, connect a .1MFD capacitor in series with low side of signal generator and B-.
For Front Tuner Core Adjustments, remove 2 screws in right dial strip end plate. Slide plate to right to expose adjustment hole.
Antenna Core Adjustments are made thru opening at front of tuner.
Osc. Core Adjustments are made thru opening at rear of tuner.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1.	.01MFD	High side to mixer section of tuning gang Low side to B-.	455KC (400~ Mod.)	BC Band 1	Tuning gang fully open	Across voice coil	A1, A2, A3, A4	Adjust for maximum deflection.
2.		Loop (Direct)	600KC	"	600KC	"	A5, A6,	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3.		"	1400KC	"	1400KC	"	A7, A8, A9	"
4.	Fig. 1	Antenna terminal thru dummy	1.87MC	SW Band 7	1.87MC	"	A10, A11	Adjust for maximum deflection.
5.	"	"	3.44MC	"	3.44MC	"	A12	Adjust for maximum deflection. Do not readjust A12 thru completion of alignment.
6.	"	"	4.0MC	SW Band 6	4.0MC	"	A13, A14	Adjust for maximum deflection
7.	"	"	7.0MC	"	7.0MC	"		Check for calibration. If necessary, slightly readjust A13, A14.
8.	"	"	9.23MC	SW Band 5	9.23MC	"	A15, A16	Adjust for maximum deflection.
9.	"	"	9.97MC	"	9.97MC	"		Check for calibration. If necessary, slightly readjust A15, A16.
10.	Fig. 1	"	11.42MC	SW Band 4	11.42MC	Across Voice Coil	A17, A18	Adjust for maximum deflection.
11.	"	"	11.99MC	"	11.99MC	"		Check for calibration. If necessary, slightly readjust A17, A18.
12.	"	"	14.63MC	SW Band 3	14.63MC	"	A19, A20	Adjust for maximum deflection.
13.	"	"	15.33MC	"	15.33MC	"		Check for calibration. If necessary, slightly readjust A19, A20.
14.	"	"	17.33MC	SW Band 2	17.33MC	"	A21, A22	Adjust for maximum deflection.
15.	"	"	17.96MC	"	17.96MC	"		Check for calibration. If necessary, slightly readjust A21, A22.
16.		Loop	169KC	LW Band 8	169KC	"	A23	Adjust for maximum deflection.
17.		"	370KC	"	370KC	"	A24	Adjust for maximum deflection. Repeat until no further improvement can be obtained.
18.		"	300KC		300KC	"	A25, A26, A27	Adjust for maximum deflection.

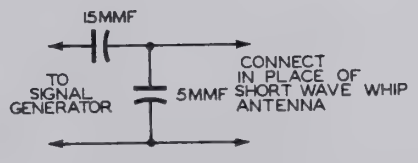


FIG. 1

PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA, GENERAL ELECTRIC, WESTINGHOUSE)

ITEM No.	USE	REPLACEMENT DATA: Stromberg-Carlson PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RETMA BASE TYPE	NOTES
V1	RF Amp.	1U4	1U4	6AR	
V2	Converter	1L6	1L6	7DC	
V3	IF Amp.	1U4	1U4	6AR	
V4	Det. -AVC-AF Amp	1U5	1U5	6BW	
V5	Audio Output	3V4	3V4	6BX	
V6	Ballast	50A1	50A1	9CM	

ELECTROLYTIC CAPACITORS

ITEM No.	RATING: CAP.	RATING: VOLT.	REPLACEMENT DATA: Stromberg-Carlson PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	▲60	150	111126		D001	FP369.1	TM-T40-150	Q-005	TVL-4575
B	■40	150			BR3015	TC492	TD-80-150	FM-1530	TVA-1413
C	▲40	150							
D	40	150							
C2	10	100	111121	PRS150V10	BR1015	TC42	TD-10-150	FM-1512	TVA-1406
C3	200	10	111127	PRS12V250	BBR100-15 BBR100-15	TC1502	TD-250-15	MTH-1225	TVA-1131

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: Stromberg-Carlson PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C4	5000		110586	BPD-005	DD-502	KO80	811-005	DC525	5HK-D5	
C5	22		110653				831-220			
C6	6.8		110671	NPO-D16.8	TCZ-6R8	ZO13	NPOA-6R8	ZT-5568	5TCCB-V68	
C7	270		171858	S1270	DD-271	TP41	811-271		5GA-T27	
C8	.047	200	110660	BPD-05	DF-503	CUB2S47		PT4147	2TM-S47	
C9	5000		110586	BPD-005	DD-502	KO80	811-005	DC525	5HK-D5	
C10	270		171858	S1270	DD-271	TP41	811-271		5GA-T27	
C11	270		171858	S1270	DD-271	TP41	811-271		5GA-T27	
C12	1000		171227	BPD-001	DD-102	KO69	801-001	DC521	5HK-D1	
C13	10000		110672	BPD-01	DD-103	KO82	811-01	DC511	5HK-S1	Note 1
C14	.1	200	110661	P288N-1	DF-104	CUB2P1		PT401	2TM-P1	
C15	.047	200	110660	BPD-05	DF-503	CUB2S47		PT4147	2TM-S47	
C16	5000		110586	BPD-005	DD-502	KO80	811-005	DC525	5HK-D5	Note 2
C17	.047	200	110660	BPD-05	DF-503	CUB2S47		PT4147	2TM-S47	
C18	10000		110672	BPD-01	DD-103	KO82	811-01	DC511	5HK-S1	
C19	10000		110672	BPD-01	DD-103	KO82	811-01	DC511	5HK-S1	
C20	10000		110672	BPD-01	DD-103	KO82	811-01	DC511	5HK-S1	
C21	2000		110840	BPD-002	DD-202	KO72	801-002	DC522	5HK-D2	
C22	1000		110824	BPD-001	DD-102	KO69	801-001	DC521	5HK-D1	
C23	100		110694	S1100	D6-101	TP34	GP1K-101	UC-531	5GA-T1	
C24	1000		110824	BPD-001	DD-102	KO69	801-001	DC521	5HK-D1	
C25	20000		110773	BPD-02	DD-203	KO85	817-02	PT412	5HK-S2	
C26	10000		110672	BPD-01	DD-103	KO82	811-01	DC511	5HK-S1	
C27	.047	400	110554	BPD-05	DD-503	CUB4S47		PT4147	4TM-S47	
C28	2000		110840	BPD-002	DD-202	KO72	801-002	DC522	5HK-D2	
C29	220		110642	S1220	D6-221	TP39	GP2K-221	UC-5322	5GA-T22	
C30	2000		110840	BPD-002	DD-202	KO72	801-002	DC522	5HK-D2	
C31	.047	400	110554	BPD-05	DF-503	CUB4S47		PT4147	4TM-S47	
C32	.047	600	110559	BPD-05	DF-503	CUB6S47		PT6147	6TM-S47	
C33	.047	400	110554	BPD-05	DF-503	CUB4S47		PT4147	4TM-S47	

Note 1. Some versions may use a 1000MMF unit (Part No. 171227) in this application.
Note 2. Not used in some versions.

CONTROLS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: Stromberg-Carlson PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1Meg	½	145188	BT-72-S	A47F-1Meg	Q13-137X	UT438	Volume tap at 350KΩ
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Not Req.	Attach to R1A.
C	Switch		Not Req.	Not Req.	SWE-20	76-2	US-27	Attach to R1A.
R2A	3Meg	½	145189	B-84	A47-3Meg-S	Q11-140	U-59	Tone
B	Shaft		Not Req.	Not Req.	FS-3	Not Req.	Not Req.	Attach to R2A.

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

ITEM No.	RATING: OHMS	RATING: WATT	REPLACEMENT DATA: Stromberg-Carlson PART No.	REPLACEMENT DATA: IRC PART No.	NOTES
R3	1Meg	½	28191	BTS-1Meg	
R4	15KΩ	½	28172	BTS-15K	
R5	82Ω	½	28145	BTS-82	
R6	33KΩ	½	28175	BTS-33K	
R7	180KΩ	½	28182	BTS-180K	
R8	18KΩ	½	28173	BTS-18K	
R9	68KΩ	½	28179	BTS-68K	
R10	120Ω	½	28147	BTS-120	
R11	1000Ω	½	28158	BTS-1000	
R12	2.7Meg 5%	½	28196	BTS-2.7Meg5%	
R13	3.9Meg 5%	½	28198	BTS-3.9Meg5%	
R14	1000Ω 5%	½	149101	BTS-1000 5%	
R15	100Ω 5%	½	149486	BTS-100 5%	
R16	1.2Meg 5%	½	28192	BTS-1.2Meg 5%	
R17	2.2Meg 5%	½	28195	BTS-2.2Meg5%	
R18	47KΩ 5%	½	149111	BTS-47KΩ 5%	

ITEM No.	RATING: OHMS	RATING: WATT	REPLACEMENT DATA: Stromberg-Carlson PART No.	REPLACEMENT DATA: IRC PART No.	NOTES
R19	33KΩ	½	149110	BTS-33K	
R20	3300Ω	½	149104	BTS-3300	
R21	10Meg	½	149125	BTS-10Meg	
R22	1Meg 5%	½	149119	BTS-1Meg 5%	
R23	3.9Meg 5%	½	28198	BTS-3.9Meg5%	
R24	3900Ω 5%	½	28165	BTS-3900 5%	
R25	68Ω 5%	½	149485	BTS-68 5%	
R26	1Meg 5%	½	149119	BTS-1Meg 5%	
R27	220Ω 5%	½	149484	BTS-220 5%	
R28	1500Ω 5%	½	149387	BTS-1500 5%	
R29	1000Ω 5%	½	149101	BTS-1000 5%	
R30	1000Ω 5%	½	149101	BTS-1000 5%	
R31	620Ω	4	149508		
R32	15KΩ 5%	½	149108	BTS-15K 5%	
R33	75Ω	2	149483		

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE: PRI.	IMPEDANCE: SEC.	REPLACEMENT DATA: Stromberg-Carlson PART No.	Hallidorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T1	7KΩ	3.4Ω	161287	Z1003	A-2901	A-3823	22S48	S-53X	

SPEAKER

ITEM No.	RATINGS: SIZE	RATINGS: FIELD	RATINGS: V. C. IMP.	REPLACEMENT DATA: Stromberg-Carlson PART No.	REPLACEMENT DATA: QUAM PART No.	NOTES
SP1	4"	PM	3.4Ω	155844	4A07	
SP2	4"	PM	3.4Ω	155844	4A07	

COILS (RF-IF)

ITEM No.	USE	DC RES.: PRI.	DC RES.: SEC.	REPLACEMENT DATA: Stromberg-Carlson PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	NOTES
L1A	Ant. Coil			171841				Band 1 (.54-1.6MC-BC)
B	Ant. Coil			171842				Band 2 (17.3-18.4MC-16M)
C	Ant. Coil			171843				Band 3 (14.6-15.7MC-19M)
D	Ant. Coil			171844				Band 4 (11.4-12.4MC-25M)
E	Ant. Coil			171845				Band 5 (9.2-10.4MC-31M)
F	Ant. Coil			171846				Band 6 (3.9-8MC-50M)
G	Ant. Coil			171847				Band 7(1.8-3.9MC-100M)
H	Ant. Coil			171848				Band 8 (.16-.41MC-LW)
L2A	Osc. Coil			171849				Band 1 (.54-1.6MC-BC)
B	Osc. Coil			171850				Band 2 (17.3-18.4MC-16M)
C	Osc. Coil			171851				Band 3 (14.6-15.7MC-19M)
D	Osc. Coil			171852				Band 4 (11.4-12.4MC-25MC)
E	Osc. Coil			171853				Band 5 (9.2-10.4MC-31MC)
F	Osc. Coil			171854				Band 6 (3.9-8MC-50M)
G	Osc. Coil			171855				Band 7 (1.8-3.9MC-100M)
H	Osc. Coil			171856				Band 8 (.16-.41MC-LW)
L3	Ant. Coil	.2Ω		139064				
L4	Input IF	16Ω	16Ω	114364	16-6758	BC-352	12-C1	
L5	Output IF	16Ω	16Ω	114453	16-6758	BC-353	12-C2	

PARTS LIST AND DESCRIPTIONS (Continued)

SELENIUM RECTIFIER

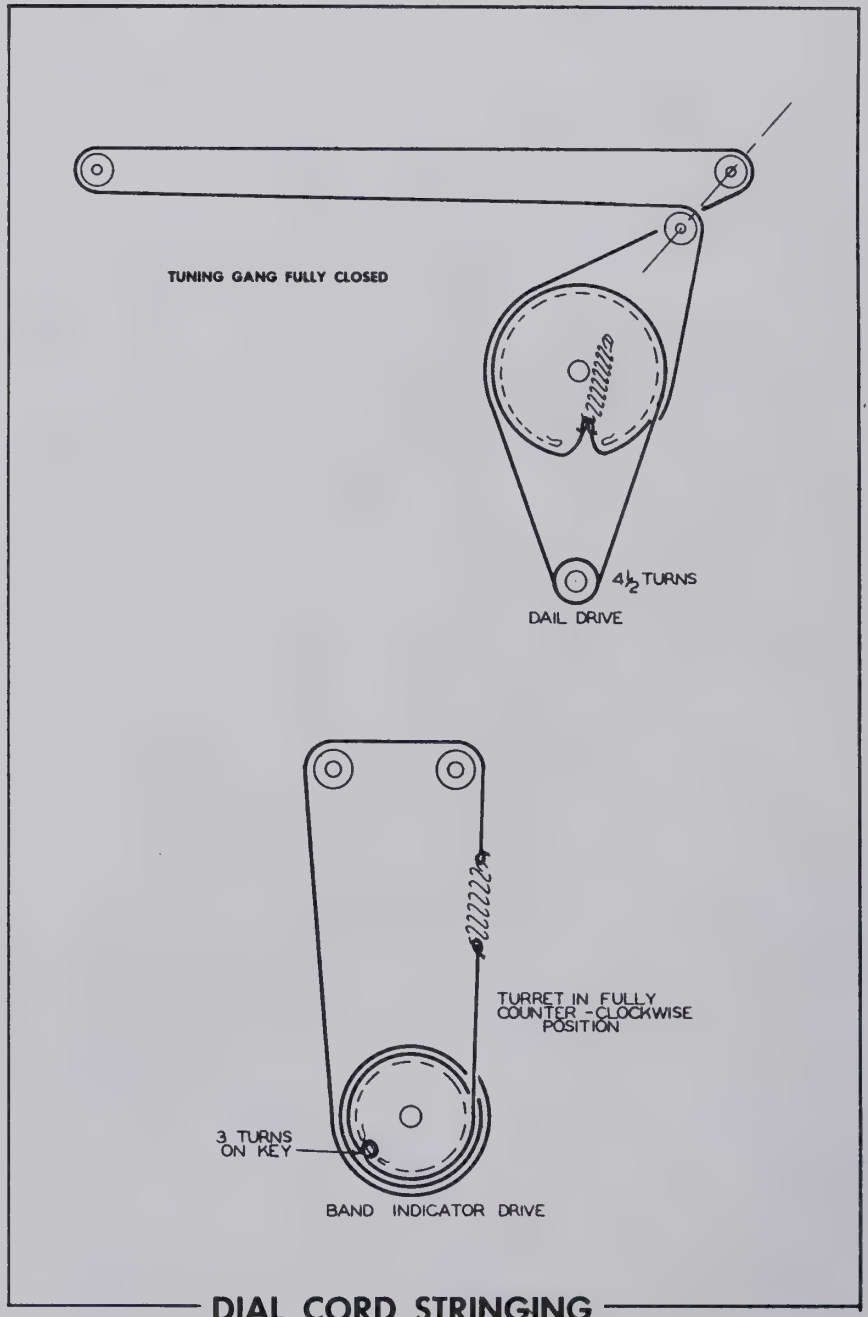
ITEM No.	RATING	REPLACEMENT DATA						NOTES
	CURRENT	Stromberg-Carlson PART No.	FEDERAL PART No.	INTERNATIONAL PART No.	MALLORY PART No.	RADIO RECEPTOR PART No.	SARKES TARZIAN PART No.	
M1	.072A	162205	1004A	RS100	6S100	5M1	100	

BATTERIES

ITEM No.	VOLTAGE	Stromberg-Carlson PART No.	REPLACEMENT DATA						INSTALLATION NOTES
			EVEREADY			BURGESS			
			"A"	"B"	"A-B"	"A"	"B"	"A-B"	
M2	9V"A" 90V"B"	141382			752			G6B60	
M3	1.5V (Dial Light)		950			2R			

MISCELLANEOUS

ITEM No.	PART NAME	Stromberg-Carlson PART No.	NOTES
M4	Dial Light	137011	#112
M5	Dial Light	137011	#112
M6	Tuning Cap.	136-012	3 Gang (19-537MMF, 19-495MMF, 19-507MMF)
M7	Tuner	164045	8 Band-Complete
M8	Switch	158057	Power Changeover (3PDT-Rotary-Wafer Type)
M9	Switch	158056	Dial Light-Push Button type
M10	Whip Ant. Assy.	139066	
A25	Trimmer Cap.		Osc. Trimmer-Band 8 (.16-.41MC-Long Wave)
A27	Trimmer Cap.		Mixer Trimmer-Band 8 (.16-.41MC-Long Wave)
A26	Trimmer Cap.		Ant. Trimmer-Band 8 (.16-.41MC-Long Wave)
A9	Trimmer Cap.		Ant. Trimmer-Band 1 (.54-1.6MC-BC)
	Knob	134262	Control (4 Used)
	Dial Strip	122057	Band 1
	Dial Strip	122055	Bands 2 & 3
	Dial Strip	122054	Bands 4 & 5
	Dial Strip	122053	Bands 6 & 7
	Dial Strip	122056	Band 8
	Dial Pointer	144024	
	Pointer	144028	Band Indicator



DIAL CORD STRINGING

STROMBERG-CARLSON
MODEL C-1

STROMBERG-CARLSON
MODEL C-1

TRADE NAME	Stromberg-Carlson, Model C-1
MANUFACTURER	Stromberg-Carlson Co., 100 Carlson Rd., Rochester, New York
TYPE SET	AC Operated Superheterodyne Receiver with Loop Antenna
TUBES (FIVE)	Types 12BE6 Converter, 12BA6 IF Amp., 12AT6 DET.-AVC-AF, 50C5 Power Output, 35W4 Rectifier
POWER SUPPLY	110-120 Volts AC RATING .25 Amp. at 117 Volts AC
TUNING RANGE—BROADCAST	540-1650KC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer, turn tuning capacitor fully closed and set pointer parallel with base of dial.
Use isolation transformer, if available. If not, connect a .1MFD capacitor in series with low side of signal generator and B-.
Loop should be maintained in same relative position to chassis as when receiver is in cabinet.
Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	.1MFD.	High side to stator on rear section of tuning gang. Low side to B-	455KC (400~ Mod.)	Tuning gang fully open.	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output. If isolation transformer is not used, reduce dummy antenna to .001MFD to reduce hum modulation.
2.		Loop	1650KC	"	"	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3.		Loop	1500KC	Tune for max. output.	"	A6	"

PARTS LIST AND DESCRIPTIONS

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA: Stromberg-Carl PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RTMA BASE TYPE	INSTALLATION NOTES
V1	Converter	12BE6	12BE6	7CH	
V2	IF Amplifier	12BA6	12BA6	7BK	
V3	Det.-AVC-AF	12AT6	12AT6	7BT	
V4	Power Output	50C5	50C5	7CV	
V5	Rectifier	35W4	35W4	5BQ	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: Stromberg-Carl PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
C1A	40	150	81779	PRS150/40-		EDL44215		TVA-3451	Filter
B	40	150		40-40					Filter
C	20	150							Filter
C2	100	500	110291	1468-0001	D6-101	5W5T1	GP1K-101	1FM-31	Osc. Grid Cap.
C3	.05	400	110801	P488-05	DF-503	PTE4S5		4TM-S5	Fixed Trimmer
C4	.05	200	110801	P288-05	DF-503	PTE4S5		2TM-S5	AVC Filter
C5	100	500	110291	1468-0001	D6-101	5W5T1	GP1K-101	1FM-31	Diode RF Filter
C6	.005	200	110805	P688-005	D6-502	PTE6D5	GP2-333-502	6TM-D5	Audio Coupling
C7A	.005		♦81797						Audio Coupling
B	250								AF Amp. Plate
C									Power Output Grid
C8	.02	600	110542	P688-02	DF-203	PTE6S2		6TM-S2	Power Output Plate
C9	.05	400	110801	P488-05	DF-503	PTE4S5		4TM-S5	Rectifier Plate
C10	.1	400	110724	P488-1	DF-104	PTE4P1		4TM-P1	Line Isolation

♦ Items C7A, C7B, C7C, R6A, R6B are combined in one unit.
When replacing items separately, C7B and C7C should total 250MMF.

CONTROLS

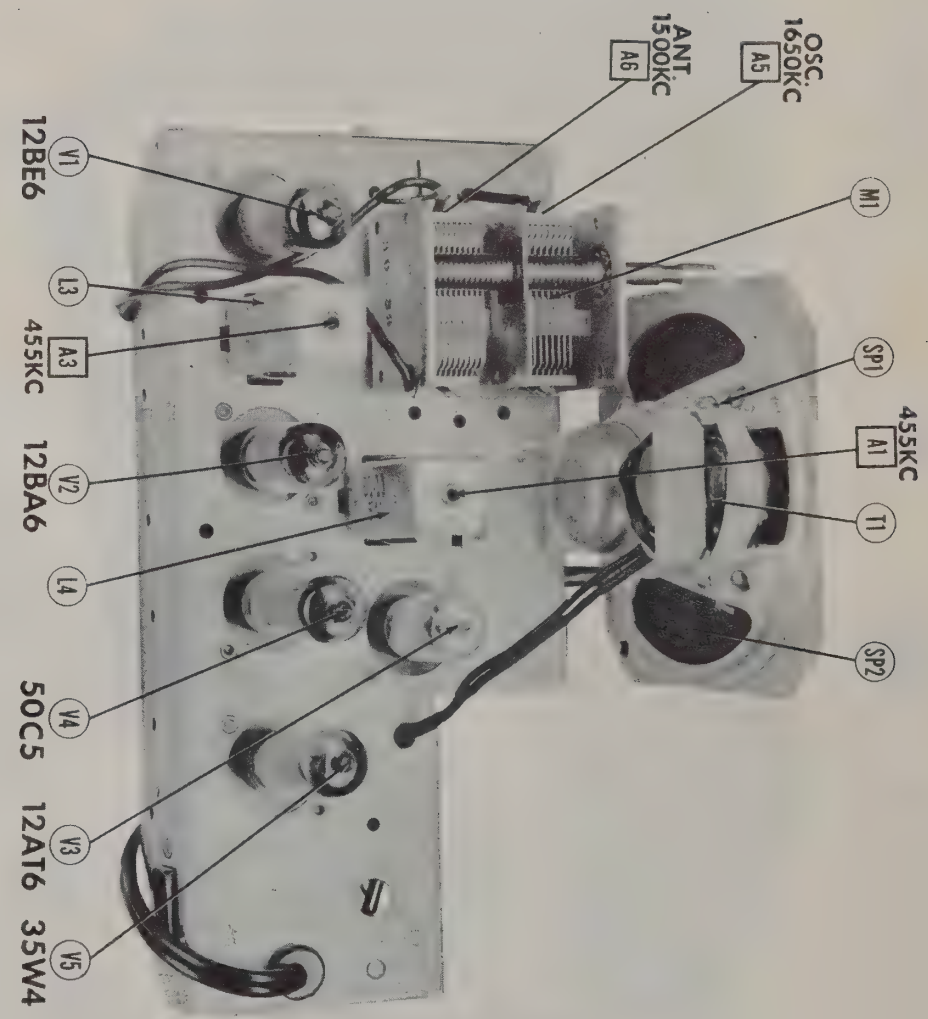
ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: Strom-Carl PART No.	IRC PART No.	CLAROSTAT PART No.	CENTRALAB PART No.	INSTALLATION NOTES
R1A	500KΩ	½	81785	Q13-133	AG-60-Z	BSK-60-S	Volume Control
B	Shaft		Not req.	Not req.	KSS-3	Not req.	Attach to R1A per instructions
C	Switch		Not req.	76-1	SWB	Not req.	Attach to R1A per instructions

RESISTORS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: Stromberg-Carl PART No.	IRC PART No.	IDENTIFICATION CODES
R2	22KΩ	½	149109	BTS-22K	Osc. Grid
R3	150Ω	½	149096	BTS-150	IF Amp. Cathode
R4	2.2Meg	½	149121	BTS-2.2Meg	AVC Network
R5	10Meg	½	149125	BTS-10Meg	AF Amp. Grid
R6A	500KΩ	½	♦81797		AF Amp. Plate
B	500KΩ	½			Output Grid
R7	150Ω	½	149096	BTS-150	Output Cathode
R8	1500Ω	1	149134	BTA-1500	Filter
R9	100Ω	½	149095	BTS-100	Filter
R10	22Ω	½	149091		Rectifier Ballast

♦ Items R6A, R6B, C7A, C7B, C7C are combined in one unit.

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		Stromberg-Car PART No.	STANCOR PART No.	MERIT PART No.	CHICAGO PART No.	
	PRI.	SEC.	PRI.	SEC.					
T1	3.2KΩ	3.6Ω	210Ω	.5Ω	81782	A-3332	A-3025	RO-2 ①	① Drill one new mounting hole.

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			INSTALLATION NOTES
			Stromberg-Carl PART No.	JENSEN PART No.	QUAM PART No.	
SP1	FIELD	V. C. IMP.	81784	ST113 Model P4-X	4A1	
	PM	3.6Ω				
SP2	CONE DIA.	V. C. DIA.				
	4"	9/16"				

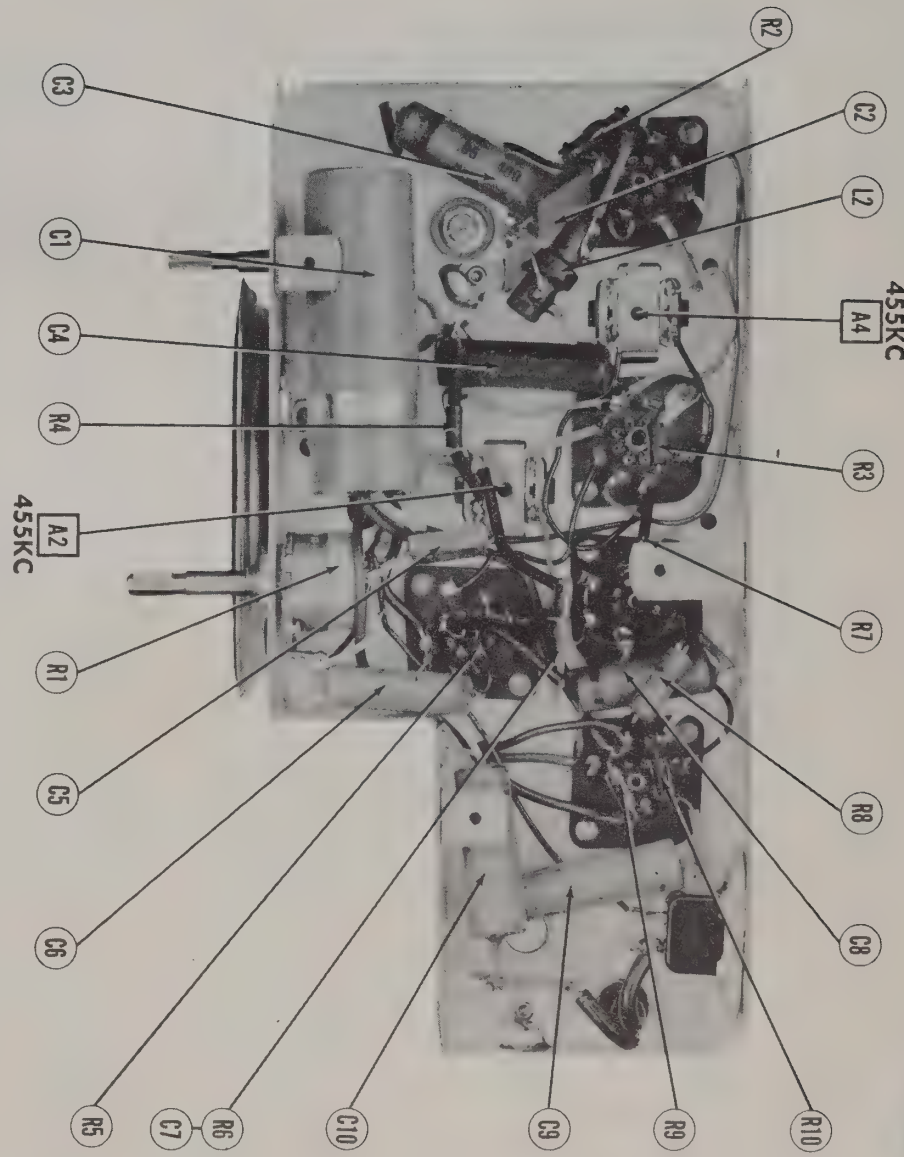
R F COILS

ITEM No.	USE	DC RES.		REPLACEMENT DATA		
		PRI.	SEC.	Stromberg-Carl PART No.		
L1	Loop Ant.	3.5Ω		81783		
L2	Osc. Coil	6.5Ω		81781		Tap .6Ω
L3	1st. IF	22Ω	22Ω	81782		
L4	2nd. IF	22Ω	22Ω	81782		

MISCELLANEOUS

ITEM No.	PART NAME	Stromberg-Carlson PART No.	NOTES
M1	2 Gang Var. Cap.	81778	(15-302MMF 14-157MMF)
	Cabinet	81777	
	Knob	81785	Volume
	Knob	81786	Tuning
	Knob	81776	Clock Controls

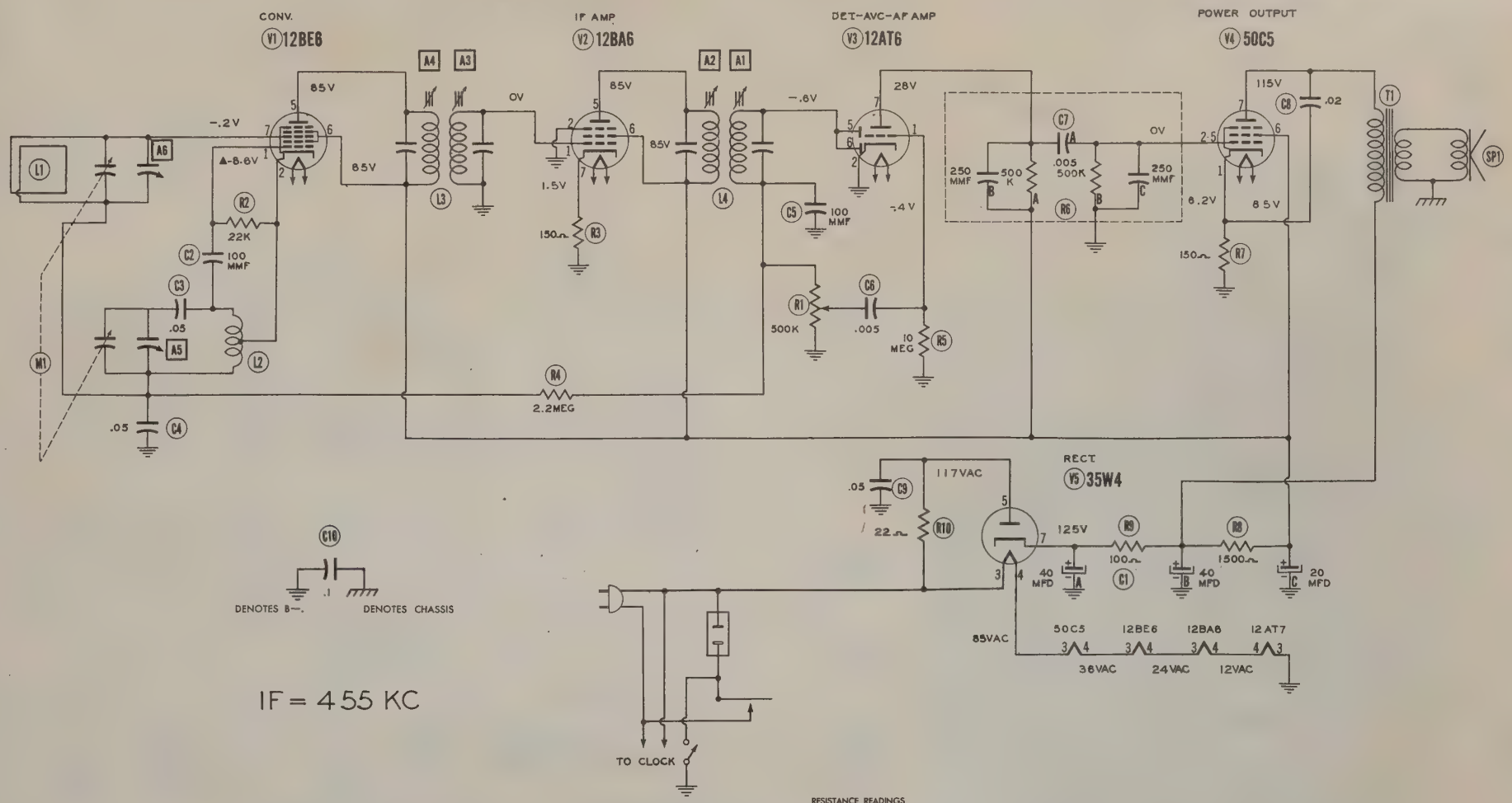
CHASSIS—BOTTOM VIEW



SET 153 FOLDER 14

STROMBERG-CARLSON MODEL C-1

STROMBERG-CARLSON MODEL C-1



IF = 455 KC

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V 1	12BE6	22KΩ	.6Ω	36Ω	24Ω	†1.6KΩ	†1.6KΩ	2.7Meg
V 2	12BA6	22Ω	0Ω	24Ω	12Ω	†1.6KΩ	†1.6KΩ	150Ω
V 3	12AT6	10Meg	0Ω	0Ω	12Ω	500KΩ	500KΩ	†500KΩ
V 4	50C5	150Ω	500KΩ	85Ω	36Ω	500KΩ	†1.6KΩ	†310Ω
V 5	35W4	†310Ω	†100Ω	117Ω	85Ω	140Ω	105Ω	45KΩ

▲ TAKEN WITH VACUUM TUBE VOLTMETER
† MEASURED FROM PIN 7 OF V5

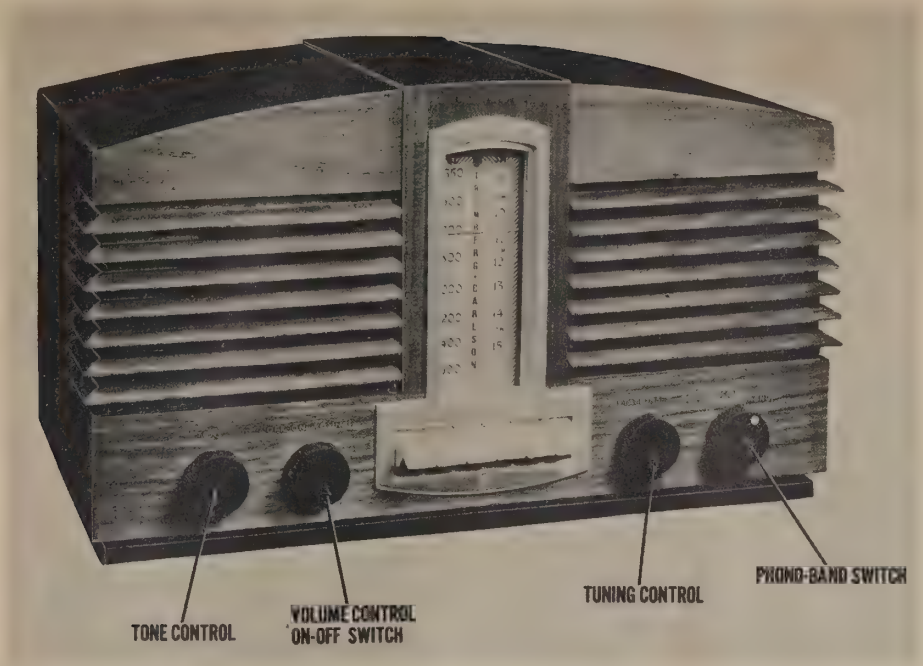
THE COOPERATION OF THE MANUFACTURER OF THIS RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

A PHOTOFACT STANDARD NOTATION SCHEMATIC

153-14

1. DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of + 10% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

STROMBERG-CARLSON
MODELS 1110-HW, 1110-PTW (SERIES 10)



STROMBERG-CARLSON MODEL 1110-HW

TRADE NAME	Stromberg-Carlson, Models 1110-HW, 1110-PTW (Phonograph)
MANUFACTURER	Stromberg-Carlson Co., 100 Carlson Road, Rochester 3, N.Y.
TYPE SET	AC Operated Radio-Phono Combination Superheterodyne (Model 1110-HW Phono Provisions Only)
TUBES (SIX)	Types, 6SK7 RF Amp., 6SA7GT/G Converter, 6SK7 IF Amp., 6SQ7 Det.-AVC-AF, 6K6GT Power Output, 6X5GT/G Rectifier.
POWER SUPPLY	105-125 Volts AC RATING .440 Amp. @ 117 Volts AC
TUNING RANGE—BROADCAST	540-1600KC **SHORT WAVE** 8.7-15.5MC

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

To set pointer, turn tuning capacitor fully closed and set pointer in a horizontal position at the top of the number 55 at the low frequency end of the dial. Loop must be connected when RF alignment is made. Volume should be at maximum position, output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1	.1 MFD.	High side to stator of center section of tuning cap. Low side to chassis.	455KC	BC	Tuning cap. open.	Across voice coil	A1,A2, A3,A4.	Adjust for maximum output
2	200 MMFD	High side to ant. terminal. Low side to chassis.	1400KC	"	1400KC	"	A5	" " " "
3	200 MMFD	"	"	"	Tune for maximum output.	"	A6,A7	" " " "
4	200 MMFD	"	600KC	"	600KC	"	A8	" " " "
5	200 MMFD	"	"	"	Tune for maximum output.	"	A9	" " " "
6	400Ω	"	14MC	SW	14MC	"	A10	Adjust for maximum output.
7	400Ω	"	"	"	Tune for maximum output.	"	A11,A12	Rock tuning cap. and adjust for maximum output. Repeat steps 6 and 7 until no further increase in output is obtained.

PUSHBUTTON ADJUSTMENTS

Make a list of stations to be set up. They may be in any order but the preferable arrangement is high to low frequency stations.
1. Turn set on and allow it to warm up for about 15 minutes.
2. Lift all the buttons and loosen the set screws for each button.
3. Manually tune in the first station. Holding the manual tuning control to keep the station from being detuned, push in completely the first button on the right.
4. Lift the button and tighten set screw firmly.
5. Check accuracy of setting by detuning with manual tuning control and retuning with pushbutton. If setting is off repeat steps 2-4.
6. To set up remaining pushbuttons follow same precedure as outlined above.

HOWARD W. SAMS & CO., INC. • 2924 East Washington Street • Indianapolis 6, Indiana

PARTS LIST AND DESCRIPTIONS

STROMBERG-CARLSON
MODELS 1110-HW, 1110-PTW

TUBES (SYLVANIA or Equivalent)

ITEM No.	USE	REPLACEMENT DATA: STROMBERG-CARLSON PART No.	REPLACEMENT DATA: STANDARD REPLACEMENT	RMA BASE TYPE	INSTALLATION NOTES
1	RF Amp.	6SK7	6SK7	8N	
2	Converter	6SA7GT/G	6SA7GT/G	8AD	
3	IF Amp.	6SK7	6SK7	8N	
4	Det.-AVC-AF	6SQ7	6SQ7	8Q	
5	Power Output	6K6GT	6K6GT	7S	
6	Rectifier	6X5GT/G	6X5GT/G	6S	

CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING: CAP.	RATING: VOLT	REPLACEMENT DATA: STROMBERG-CARLSON PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SOLAR PART No.	SPRAGUE PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
7A	10	350	111004	AEF64K4A	UP6CJ17	FP330	DY-312	EL-323	■ Filter
B	30	350							▲ "
C	20	25							Cath. Bypass
8	.01	600	25485	684-01	DT6S1	TP410	S-6-01	TC-11	Output Plate Bypass
9	.01	600	25485	684-01	DT6S1	TP410	S-6-01	TC-11	Audio Coupling
10	.01	600	25485	684-01	DT6S1	TP410	S-6-01	TC-11	Tone Compensation
11	.02	600	25484	684-02	DT6S2	TP412	S-6-02	TC-12	" "
12	.005	600	27760	684-005	DT6D5	TP408	S-6-005	TC-25	Audio Coupling
13	.005	600	27760	684-005	DT6D5	TP408	S-6-005	TC-25	AVC Filter
14	.01	600	25485	684-01	DT6S1	TP410	S-6-01	TC-11	RF Coupling
15	.05	400	40632	484-05	DT4S5	TP426	S-4-05	TC-15	Screen Bypass
16	100	500	34800	1468-0001	5W5T1	MC235	MO.5-31	1FM-31	Audio Plate Bypass
17	250	500	25376	1468-00025	5W5T25	MC240	MO.5-325	1FM-325	Phono Tone Compensation
18	100	500	34800	1468-0001	5W5T1	MC235	MO.5-31	1FM-31	Osc. Grid Capacitor
19	2500	300	29559	1467-0025	1W5D25	MC460	MW.5-225	1FM-22	AVC Filter
20	2500	300	29559	1467-0025	1W5D25	MC460	MW.5-225	1FM-22	RF Coupling
21	30	500	34889		5W5Q3		MW.5-43	MS-43	Ext. Ant. Coupling

CONTROLS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: STROMBERG-CARLSON PART No.	MALLORY PART No.	IRC PART No.	CLAROSTAT PART No.	INSTALLATION NOTES
22A	1 Meg.	1	145005	MRT443	D18-137XX*	T-112	Volume Control
B	Shaft		Not Req.	Not Req.	A	Not Req.	Attach to 22A per instructions
C	Switch		" "	M26	41	SW-A	" " " " "
23A	2 Meg.	1	145004			M-61-S	Tone Control
B	Shaft		Not Req.			Not Req.	Attach to 23A per instructions

*Use 500KΩ tap only.

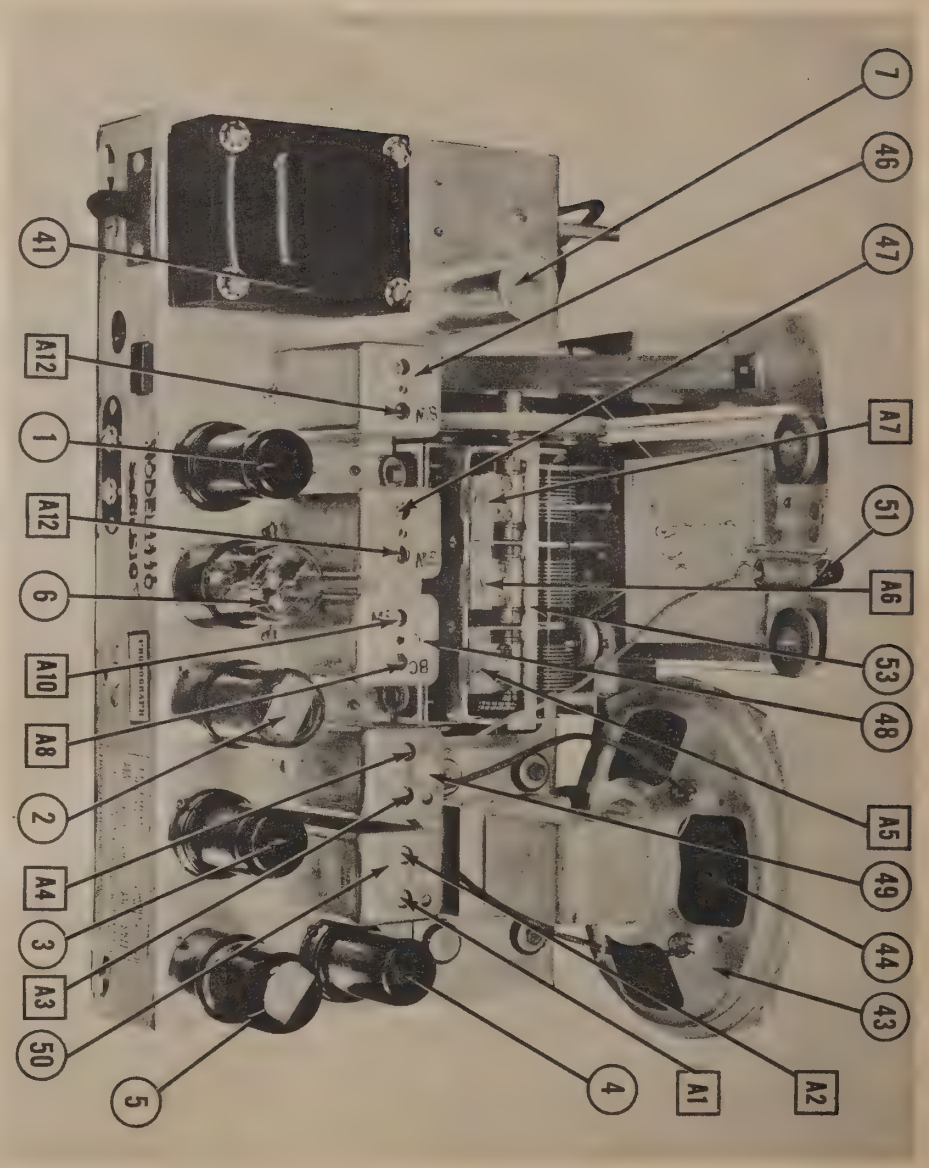
RESISTORS

ITEM No.	RATING: RESISTANCE	RATING: WATTS	REPLACEMENT DATA: STROMBERG-CARLSON PART No.	IRC PART No.	IDENTIFICATION CODES
24	2.2 Meg.	½	28195	BTS-2.2 Meg.	Red-Red-Grn. RF Grid
25	1 Meg.	½	28191	BTS-1 Meg.	Br.-Blk.-Grn. AVC Network
26	15KΩ	1	149186	BTA-15K	Br.-Grn.-Or. RF Plate Load
27	15KΩ	1	149186	BTA-15K	Br.-Grn.-Or. RF Plate Load
28	22KΩ	½	27407	BTS-22K	Red-Red-Or. Oscillator Grid
29	270KΩ	½	28184	BTS-270K	Red-Vi.-Yl. Series Phono
30	2.2 Meg.	½	28195	BTS-2.2 Meg.	Red-Red-Grn. AVC Network
31	470KΩ	½	28187	BTS-470K	Yl.-Vi.-Yl. Diode Load
32	10 Meg.	½	28203	BTS-10 Meg.	Br.-Blk.-Blue AF Grid
33	12KΩ	½	28171	BTS-12K	Br.-Red-Or. Tone Compensation
34	22KΩ	2	149011	BT-2-22K	Red-Red-Or. Screen Dropping
35	22KΩ	2	149011	BT-2-22K	Red-Red-Or. Screen Dropping
36	270KΩ	½	28184	BTS-270K	Red-Vi.-Yl. AF Plate Load
37	470KΩ	½	28187	BTS-470K	Yl.-Vi.-Yl. Output Grid
38	1 Meg.	½	28191	BTS-1 Meg.	Br.-Blk.-Grn. Feedback
39	680Ω	1	149174	BTA-680	Blue-Gray-Br. Output Cathode

FILTER CHOKE

ITEM NO.	RATINGS: TOTAL DIRECT CURRENT	RATINGS: D.C. RESISTANCE	RATINGS: INDUCTANCE (0 CURRENT 1000~)	REPLACEMENT DATA: STROMBERG-CARLSON PART NO.	STANCOR PART NO.	THORDARSON PART NO.	INSTALLATION NOTES
40	.073A	190Ω	4 Henries	161001	C-1002 #	T22C53#	#Drill new mounting holes.

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA			INSTALLATION NOTES
	PRI.	SEC. 1	SEC. 2	SEC. 3	STROMBERG-CARLSON PART No.	STANCOR PART No.	THORDARSON PART No.	
41	117V AC @ .44A	500V CT @ .073A	6.4V AC @ 2.5A		161402	P-6011†	T22R02	†Add resistor to reduce voltage

TRANSFORMER (OUTPUT)

ITEM No.	RATING				REPLACEMENT DATA				INSTALLATION NOTES
	IMPEDANCE		DC RES.		STROMBERG-CARLSON PART No.	STANCOR PART No.	THORDAR'N PART No.		
	PRI.	SEC.	PRI.	SEC.					
42	6400Ω	3.5Ω	350Ω	.7Ω	161207	A-3878	T22S47		

SPEAKER

ITEM No.	RATINGS		REPLACEMENT DATA			INSTALLATION NOTES
			STROMBERG-CARLSON PART No.	JENSEN PART No.		
43	FIELD PM	VC IMP. 3.5Ω	155013	ST-105* Mod. P5-W		*Fabricate new mounting bracket.
44	CONE DIA. 5-1/8"	VC DIA. 9/16"	155006			

R F COILS

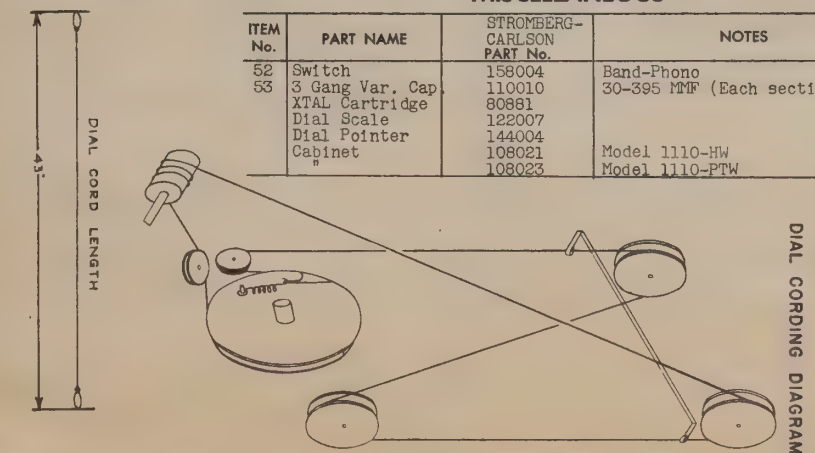
ITEM No.	USE	DC RES.		REPLACEMENT DATA		
		PRI.	SEC.	STROMBERG-CARLSON PART No.	MEISSNER PART No.	
45	Loop Ant.		0Ω			
46A	Ant. Coil		3.5Ω	114011		Items 46A & 46B are in same can.
B	" "		.1Ω			
47A	RF Coil		4.5Ω	114012		" 47A & 47B are in same can.
B	" "		.1Ω			
48A	Osc. Coil	.4Ω		114013		" 48A & 48B are in same can.
B	" "		.1Ω			
49	Input IF	14Ω	13.5Ω	114307	16-6658	
50	Output IF	14Ω		114308	16-6670	

DIAL LIGHT

ITEM No.	BASE TYPE	VOLTS	AMPS.	BEAD COLOR	REPLACEMENT DATA		INSTALLATION NOTES
					STROMBERG-CARLSON PART No.		
51	Bayonet	6-8	0.25	Blue	29956		Type 44

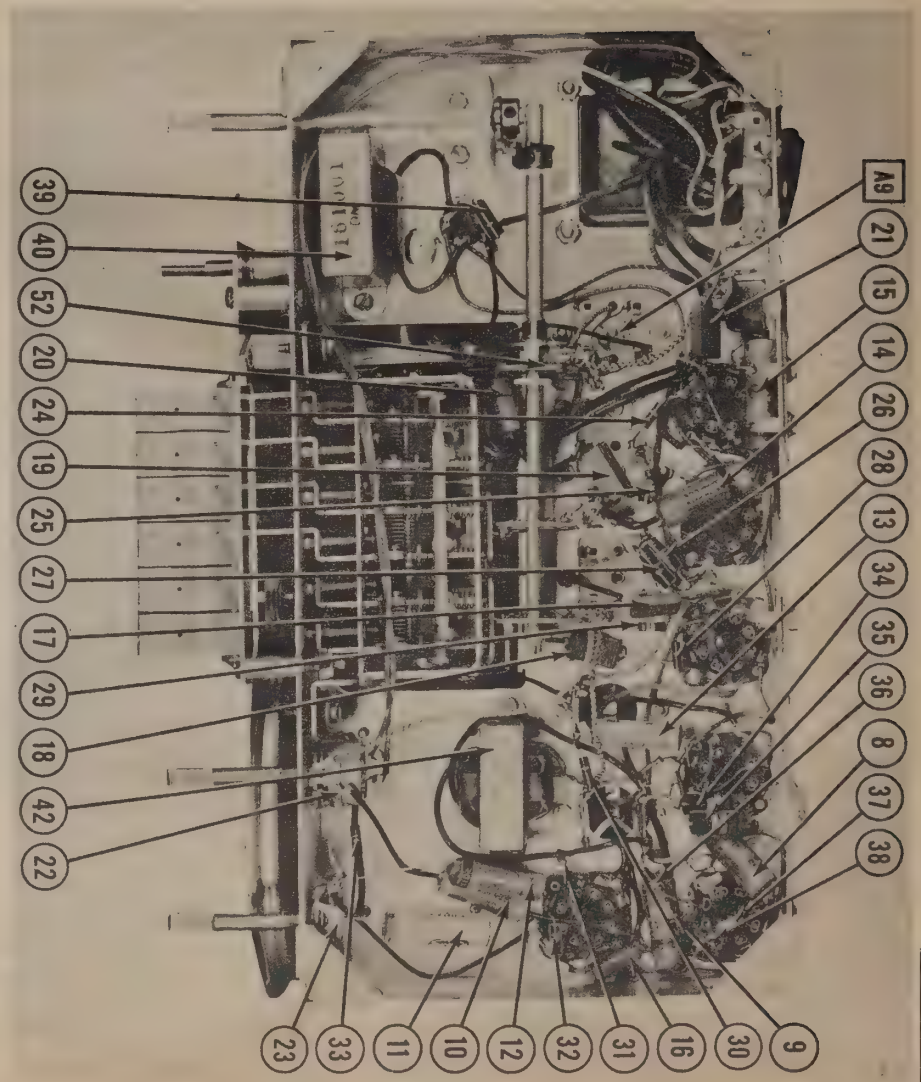
MISCELLANEOUS

ITEM No.	PART NAME	STROMBERG-CARLSON PART No.	NOTES
52	Switch	158004	Band-Phono
53	3 Gang Var. Cap.	110010	30-395 MMF (Each section)
	XTAL Cartridge	80881	
	Dial Scale	122007	
	Dial Pointer	144004	
	Cabinet	108021	Model 1110-HW
	"	108023	Model 1110-PTW



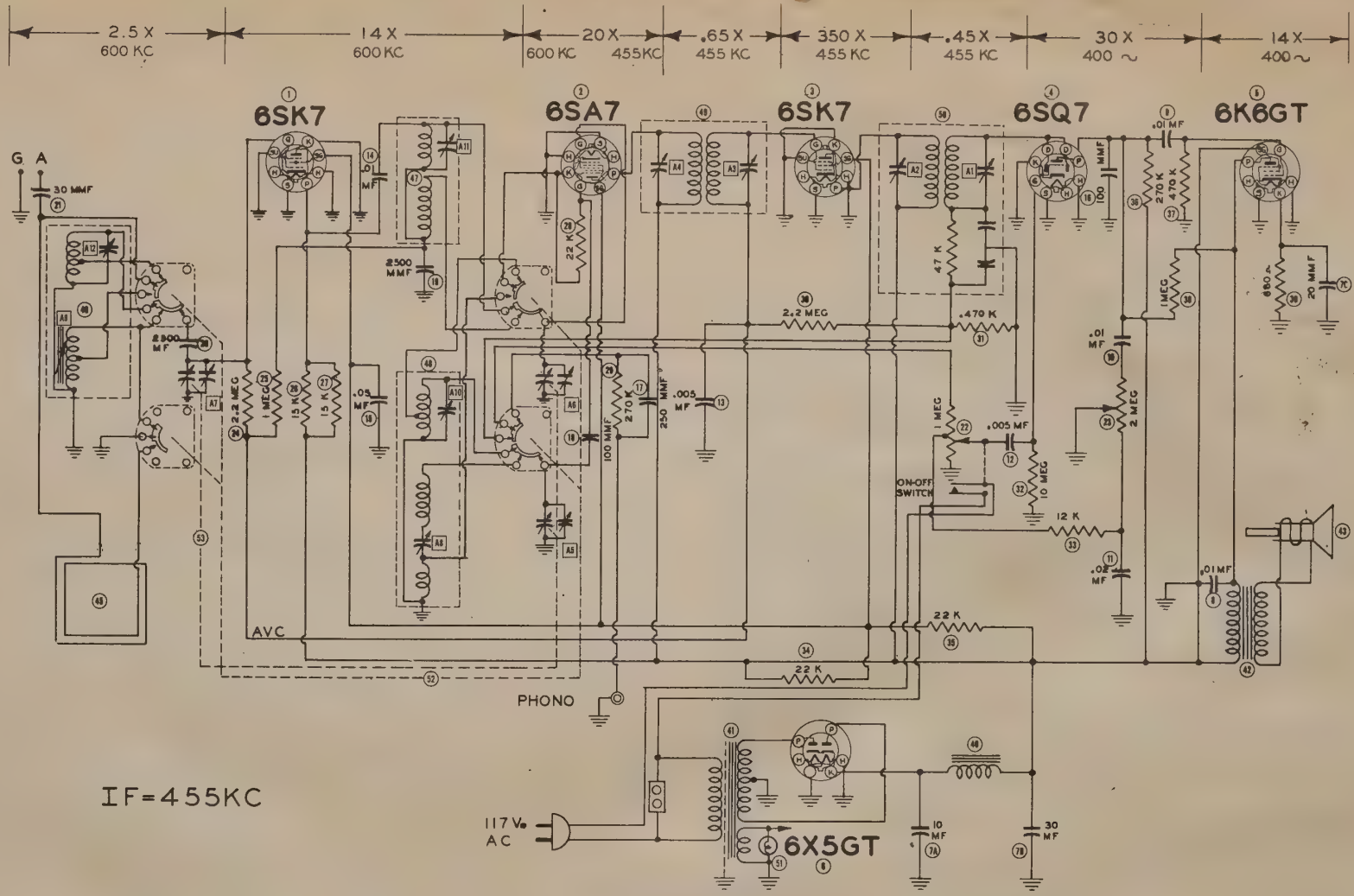
DIAL CORDING DIAGRAM

CHASSIS—BOTTOM VIEW



STROMBERG-CARLSON MODELS 1110-HW, 1110-PTW

STROMBERG-CARLSON MODELS 1110-HW, 1110-PTW



VOLTAGE AND RESISTANCE READINGS TAKEN IN BROADCAST POSITION.

VOLTAGE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	6SK7	0 V.	6.4 V.AC	0 V.	-45 V.DC	0 V.	87 V.DC	0 V.	165 V.DC
2	6SA7GT	0 V.	6.4 V.AC	268 V.DC	87 V.DC	-6.7 V.DC	0 V.	0 V.	-17 V.DC
3	6SK7	0 V.	6.4 V.AC	0 V.	-28 V.DC	0 V.	87 V.DC	0 V.	268 V.DC
4	6SQ7	0 V.	-25 V.DC	0 V.	-28 V.DC	-28 V.DC	117 V.DC	0 V.	6.4 V.AC
5	6K6GT	0 V.	6.4 V.AC	260 V.DC	268 V.DC	0 V.	117 V.DC	0 V.	21 V.DC
6	6X5GT	0 V.	6.4 V.AC	250 V.AC	268 V.DC	250 V.AC	165 V.DC	0 V.	280 V.DC

RESISTANCE READINGS

Item	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
1	6SK7	0 Ω	.1 Ω	0 Ω	4.2 MEG	0 Ω	65 KΩ	0 Ω	58 KΩ
2	6SA7GT	0 Ω	.1 Ω	50 KΩ	65 KΩ	20 KΩ	.5 Ω	0 Ω	3 MEG
3	6SK7	0 Ω	.1 Ω	0 Ω	2.2 MEG	0 Ω	65 KΩ	0 Ω	50 KΩ
4	6SQ7	0 Ω	10 MEG	0 Ω	320 KΩ	320 KΩ	290 KΩ	0 Ω	.1 Ω
5	6K6GT	0 Ω	.1 Ω	50 KΩ	50 KΩ	440 KΩ	290 KΩ	0 Ω	700 Ω
6	6X5GT	0 Ω	.1 Ω	160 Ω	50 KΩ	180 Ω	60 KΩ	0 Ω	50 KΩ

THE COOPERATION OF THE MANUFACTURER OF THIS RECEIVER MAKES IT POSSIBLE TO BRING YOU THIS SERVICE

RESISTANCE READINGS IN THE B+ CIRCUITS MAY VARY WIDELY ACCORDING TO THE CONDITION OF THE FILTER CAPACITORS

478-30

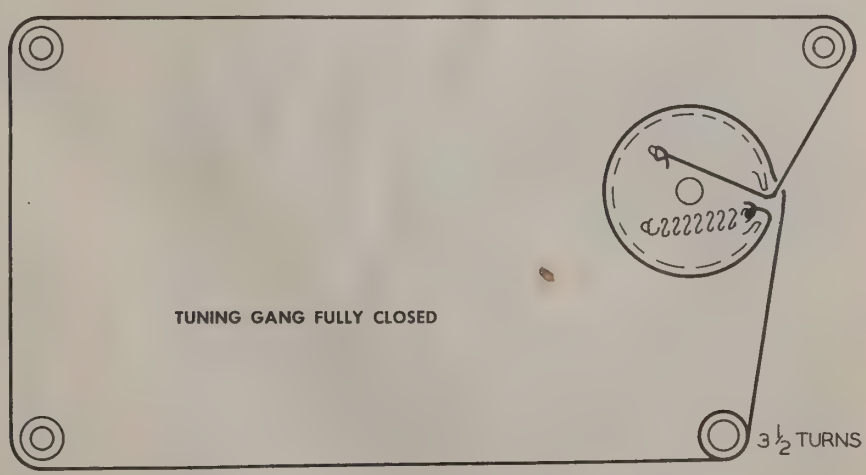
The stage gain measured values listed above are approximate values for an average operative stage, rather than an absolute value. It should be borne in mind that it is possible to introduce so many variables into the measurement operation, such as, type of equipment used for measuring, handling and placement of probes, the accuracy of alignment, etc., that an absolute reading is impractical. AVC is made inoperative and 3-volt battery bias substituted for measurement.

1. **DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1,000 ohms per volt.**
2. **Socket connections are shown as bottom views.**
3. **Measured values are from socket pin to common negative.**
4. **Line voltage maintained at 117 volts for voltage readings.**
5. **Nominal tolerance on component values makes possible a variation of ± 10% in voltage and resistance readings.**
6. **Volume control at maximum, no signal applied for voltage measurements.**

STROMBERG-CARLSON
MODEL SR-406

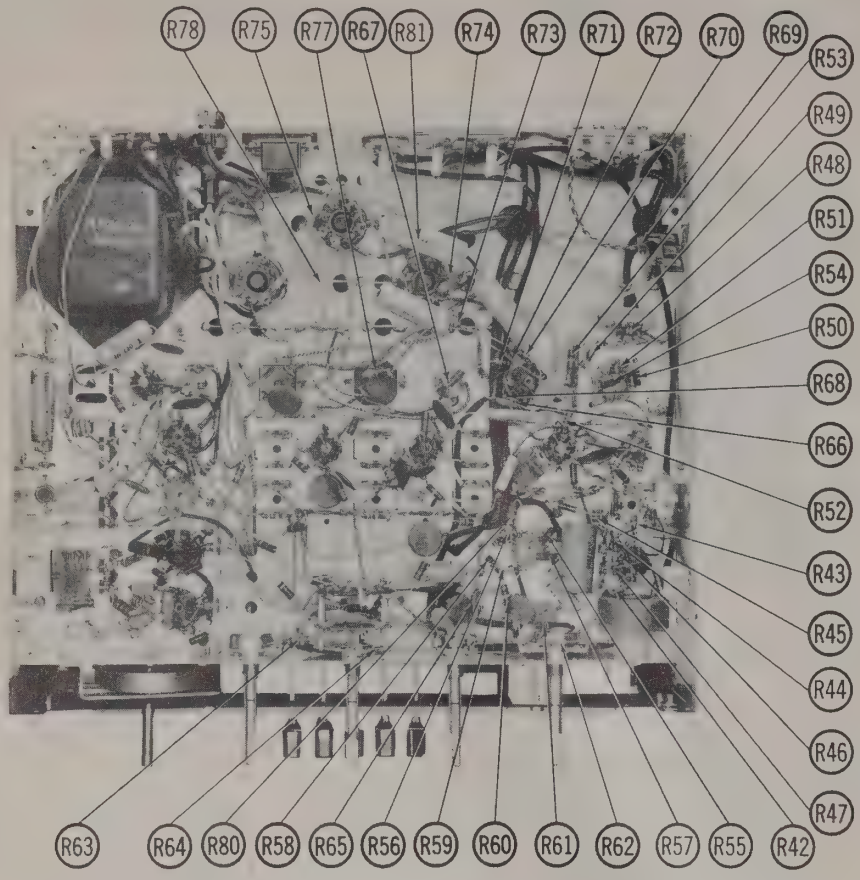
STROMBERG-CARLSON
MODEL SR-406

TRADE NAME	Stromberg-Carlson Model SR-406		
MANUFACTURER	Stromberg-Carlson Co., Service Dept., 1700 University Ave., Rochester 10, N. Y.		
TYPE SET	AC Operated FM-AM Receiver		
TUBES	Seventeen		
POWER SUPPLY	110-120 Volts AC-60 Cycles	RATING	1.4 Amp. @ 117 Volts
TUNING RANGE - BROADCAST	540 KC-1620KC	FREQ. MOD.	88MC-108MC

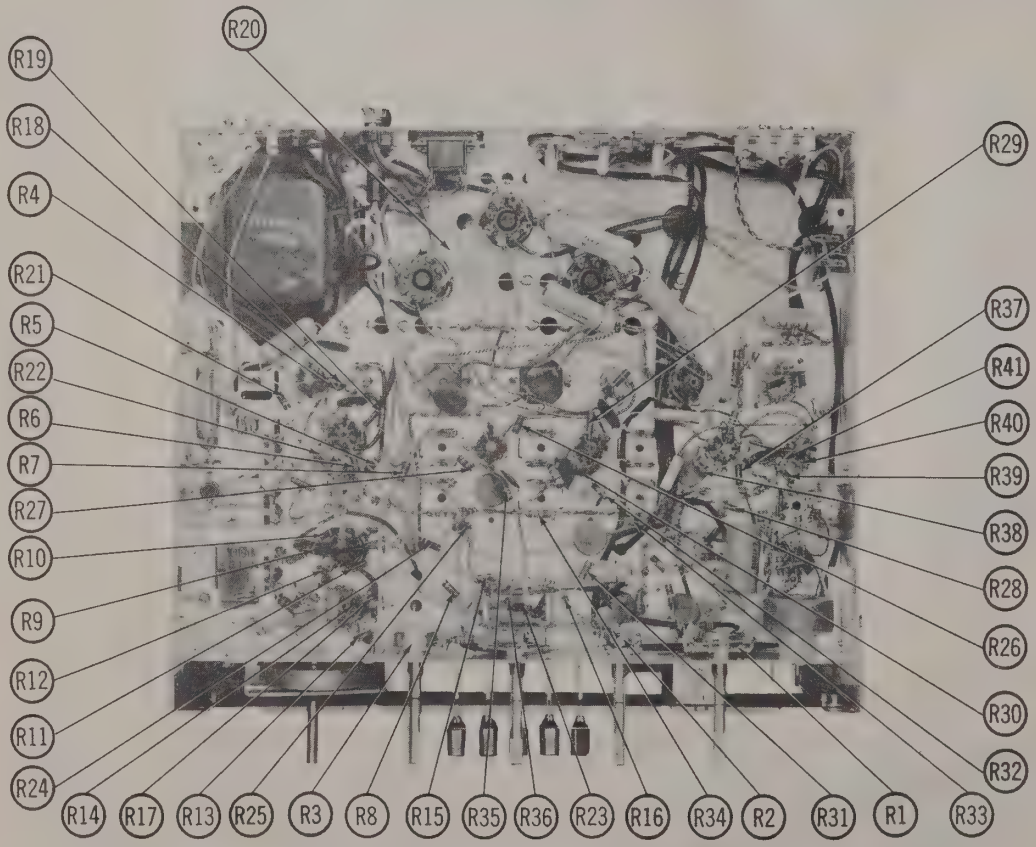


DIAL CORD STRINGING

HOWARD W. SAMS & CO., INC. • Indianapolis 5, Indiana



CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION



CHASSIS-BOTTOM VIEW-RESISTOR IDENTIFICATION

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.
Complete "AM" alignment before starting "FM". With tuning gang closed, adjust pointer to "0" on logging scale.

AM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1	.01MFD	High side to pin 7 (grid) of 6BE6 (V5). Low side to chassis.	455KC (400∿ Mod.)	AM (Sharp)	Low frequency end of dial	DC probe to point (A). Common to chassis.	A1, A2, A3, A4, A5, A6	Adjust for maximum deflection.
2	200MMF	Across AM ant. terminals	600KC	"	600KC	"	A7	"
3	"	"	1400KC	"	1400KC	"	A8, A9, A10	"
4	"	"	600KC	"	600KC	"	A7, A11, A12	Adjust for maximum deflection. Repeat step 2, 3 & 4 until proper tracking is obtained.
5	.01MFD	High side to pin 1 (grid) of 6BA6 (V7). Low side to chassis.	455KC (10KC Mod.)	"	Low frequency end of dial	AC voltmeter across output.	A13	Adjust for MINIMUM reading.

AM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
1	.01MFD	High side to pin 7 (grid) of 6BE6 (V5). Low side to chassis.	455KC (25KC Swp.)	AM (Sharp)	Low frequency end of dial	Across recorder output jack	A1, A2 A3, A4, A5, A6	Short pin 1 (grid) of 6BE6 (V5) to chassis. Adjust for curve of maximum amplitude and symmetry similar to Fig. 1.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
6	.1MFD	High side to pin 1 (grid) of 6AU6 (V2). Low side to chassis.	10.7MC (unmod.)	FM (AFC off)	100MC	DC probe to "Test Jack"	A14, A15 A16, A17 A18, A19 A20	Adjust for maximum deflection.
7	"	"	"	"	"	DC probe across recorder output jack	A21	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE

Use frequency modulated signal with 60∿ modulation and 450KC sweep. Use 120∿ sawtooth voltage in scope for horizontal deflection.

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
8	.1MFD	High side to pin 1 (grid) of 6AU6 (V2). Low side to chassis.	10.7MC (450KC Swp)	FM (AFC off)	100MC	Vert amp. thru .01MFD to point (B). Low side to chassis.	A14, A15, A16, A17, A18, A19, A20	Adjust for curve of maximum amplitude and symmetry similar to Fig. 2.
9	"	"	"	"	"	Scope across recorder output jack.	A21	Adjust so that 10.7MC occurs at center of crossover lines similar to Fig. 3. SLIGHTLY retouch A14 for maximum amplitude and straightness of crossover lines.

FM RF ALIGNMENT

	DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
10	120Ω Carbon Resistor	Across FM ant. terminals with 120Ω in each lead	100MC (25KC Swp.)	FM (AFC off)	100MC	DC probe to point (A). Common to chassis.	A22, A23 A24	Adjust for maximum deflection.
11	"	"	"	"	"	"	L3, L6, L7	Using 100MC as a reference, check dial calibration and sensitivity at 88, 90, 106 and 108MC. If this check shows excessive variation, compress or expand L3, L6 and L7. Repeat steps 10 & 11 until proper tracking has been obtained.

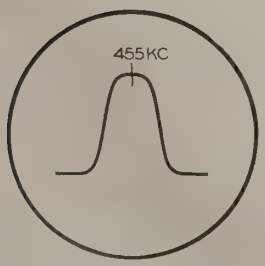


FIG. 1

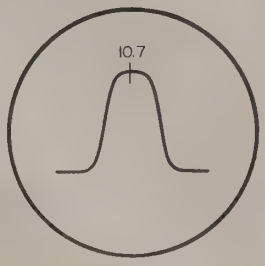


FIG. 2

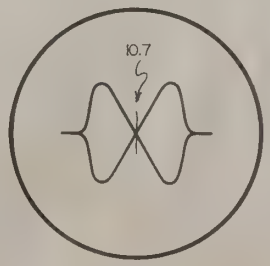
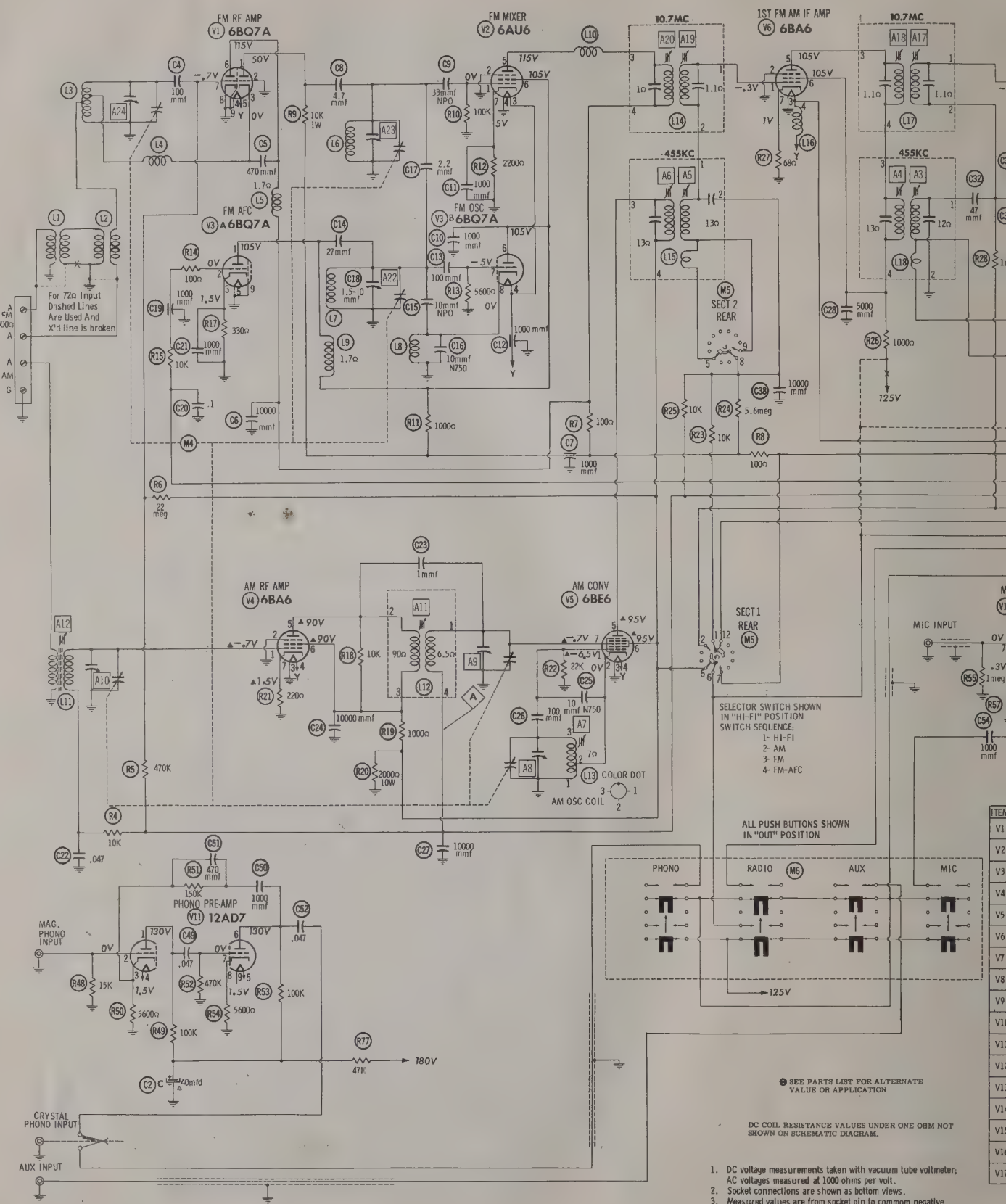


FIG. 3



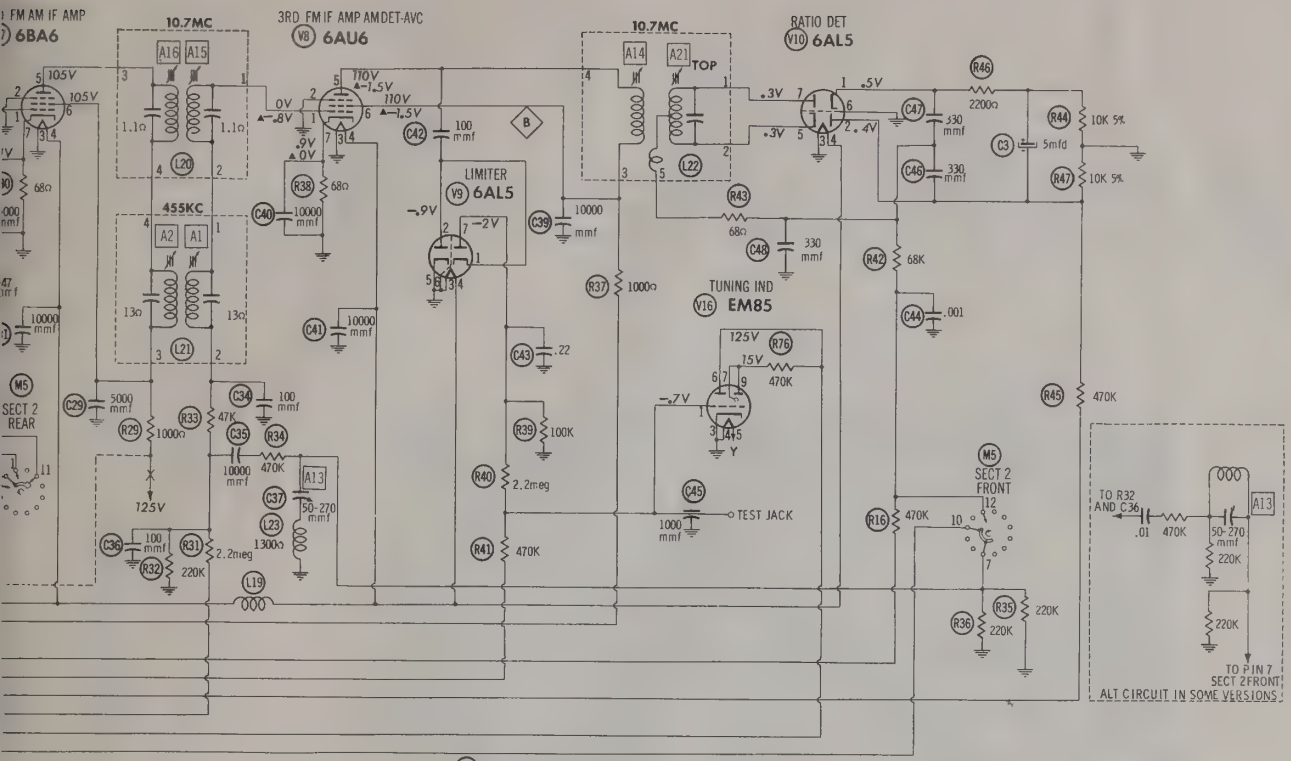
ITEM
V1
V2
V3
V4
V5
V6
V7
V8
V9
V10
V11
V12
V13
V14
V15
V16
V17

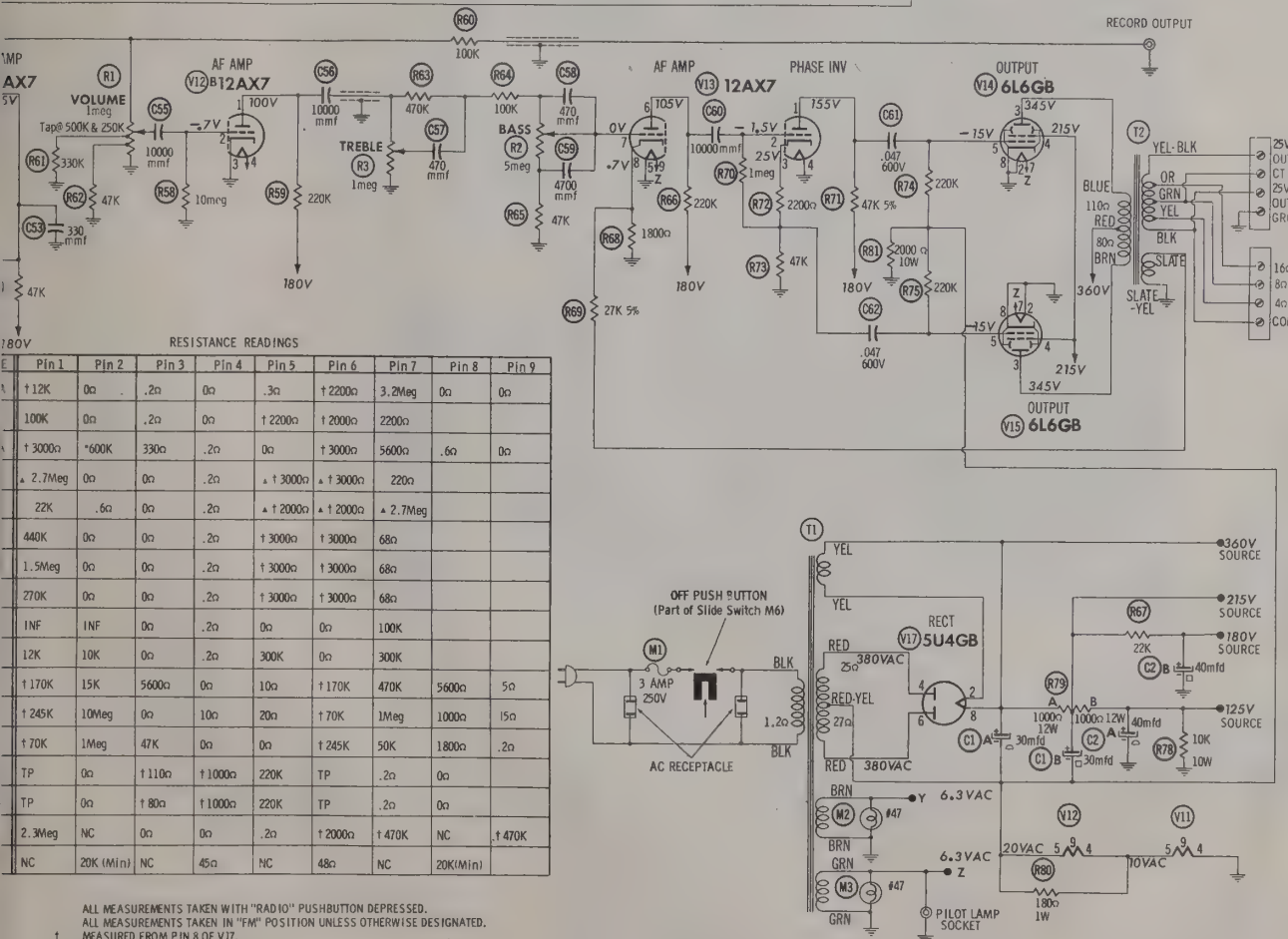
❸ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM.

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured at 1000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to commom negative.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC



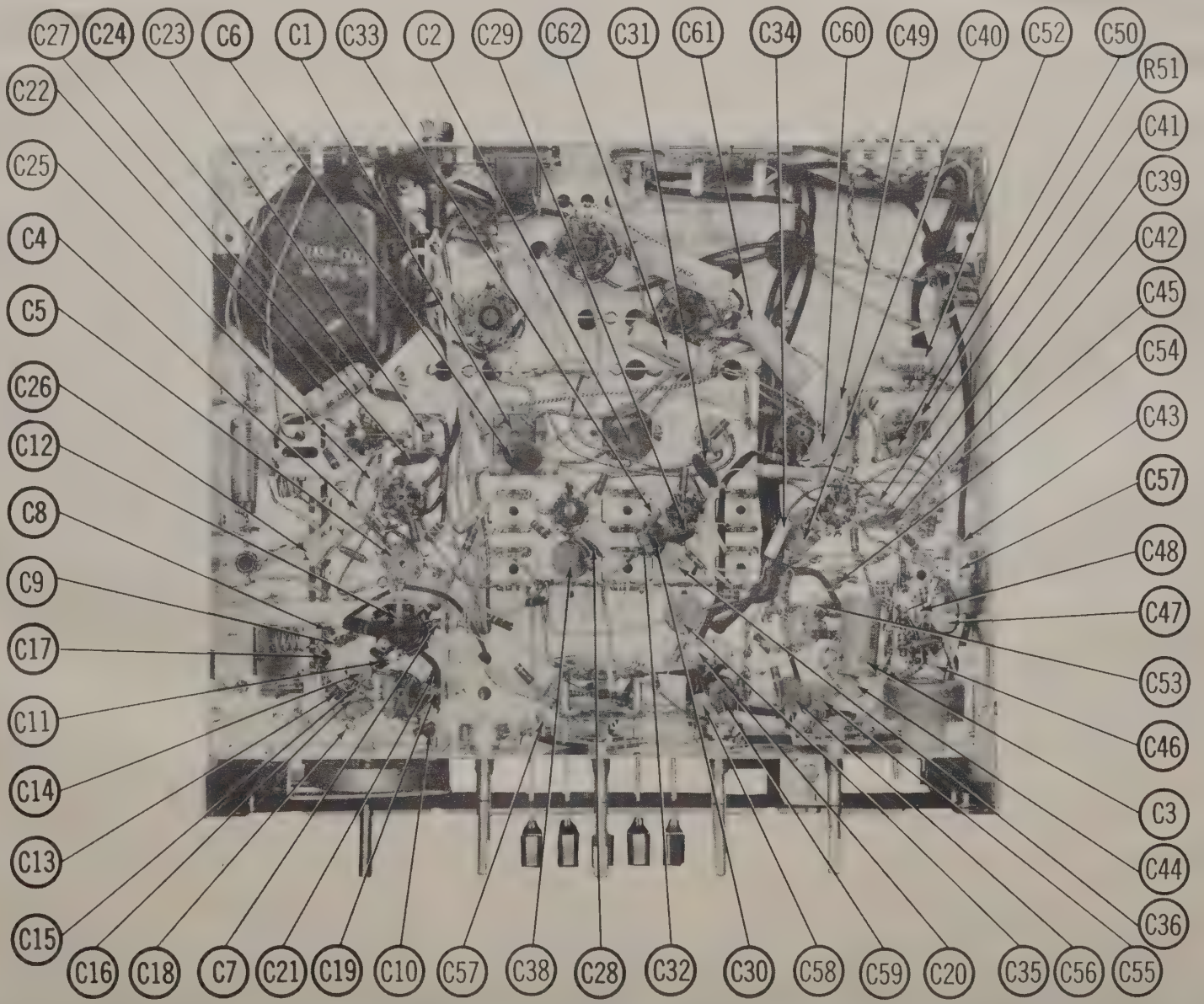


RESISTANCE READINGS

	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
	†12K	0Ω	.2Ω	0Ω	.3Ω	†2200Ω	3.2Meg	0Ω	0Ω
	100K	0Ω	.2Ω	0Ω	†2200Ω	†2000Ω	2200Ω		
	†3000Ω	*600K	330Ω	.2Ω	0Ω	†3000Ω	5600Ω	.6Ω	0Ω
	▲2.7Meg	0Ω	0Ω	.2Ω	▲†3000Ω	▲†3000Ω	220Ω		
	22K	.6Ω	0Ω	.2Ω	▲†2000Ω	▲†2000Ω	▲2.7Meg		
	440K	0Ω	0Ω	.2Ω	†3000Ω	†3000Ω	68Ω		
	1.5Meg	0Ω	0Ω	.2Ω	†3000Ω	†3000Ω	68Ω		
	270K	0Ω	0Ω	.2Ω	†3000Ω	†3000Ω	68Ω		
	INF	INF	0Ω	.2Ω	0Ω	0Ω	100K		
	12K	10K	0Ω	.2Ω	300K	0Ω	300K		
	†170K	15K	5600Ω	0Ω	10Ω	†170K	470K	5600Ω	5Ω
	†245K	10Meg	0Ω	10Ω	20Ω	†70K	1Meg	1000Ω	15Ω
	†70K	1Meg	47K	0Ω	0Ω	†245K	50K	1800Ω	.2Ω
	TP	0Ω	†110Ω	†1000Ω	220K	TP	.2Ω	0Ω	
	TP	0Ω	†80Ω	†1000Ω	220K	TP	.2Ω	0Ω	
	2.3Meg	NC	0Ω	0Ω	.2Ω	†2000Ω	†470K	NC	†470K
	NC	20K (Min)	NC	45Ω	NC	48Ω	NC	20K(Min)	

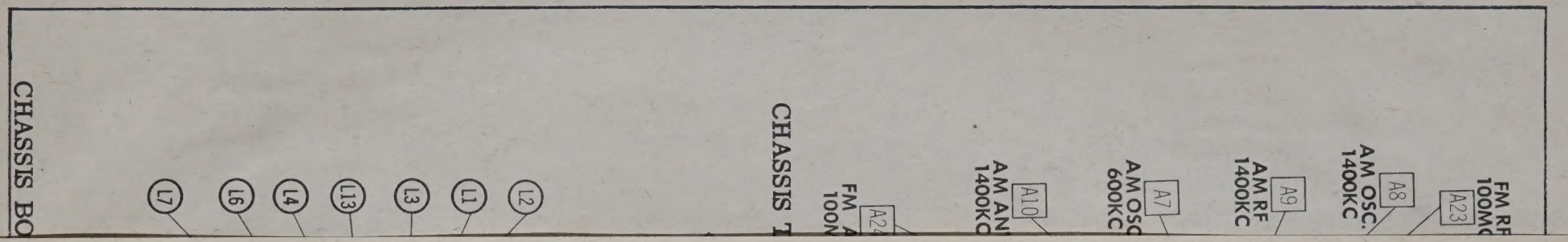
ALL MEASUREMENTS TAKEN WITH "RADIO" PUSHBUTTON DEPRESSED.
ALL MEASUREMENTS TAKEN IN "FM" POSITION UNLESS OTHERWISE DESIGNATED.
† MEASURED FROM PIN 8 OF V17.
* MEASURED IN "FM-AFC" POSITION.
▲ MEASURED IN "AM" POSITION.
NC NO CONNECTION
TP TIE POINT

364-14



CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION

STROMBERG-CARLSON
MODEL SR-406



PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	Stromberg-Carlson PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1A	1Meg	½	145210-000	ABT-165		Q18-137XX	UDT-289	Volume, Tap @ 250K & 500K
B	Shaft			AK-3		Not req.	Not req.	
R2A	5Meg	½	145211-000	AB-88	A47-5Meg-Z	Q13-141	U65	Bass
B	Shaft			AK-3	FS-3	Not req.	Not req.	
R3A	1Meg	½	145212-000	B-69	A47-1Meg-S	Q11-137	U54	Treble
B	Shaft			Not req.	FS-3	Not req.	Not req.	

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	Stromberg-Carlson PART No.	IRC PART No.	
R4	10K			BTS-10K	
R5	470K			BTS-470K	
R6	22Meg			BTS-22Meg	
R7	100Ω			BTS-100	
R8	100Ω			BTS-100	
R9	10K	1		BTA-10K	
R10	100K			BTS-100K	
R11	1000Ω			BTS-1000	
R12	2200Ω			BTS-2200	
R13	5600Ω			BTS-5600	
R14	100Ω			BTS-100	
R15	10K			BTS-10K	
R16	470K			BTS-470K	
R17	330Ω			BTS-330	
R18	10K			BTS-10K	
R19	1000Ω			BTS-1000	
R20	2000Ω	10		PW10-2000	
R21	220Ω			BTS-220	
R22	22K			BTS-22K	
R23	10K			BTS-10K	
R24	5.6Meg			BTS-5.6Meg	
R25	10K			BTS-10K	
R26	1000Ω			BTS-1000	
R27	68Ω			BTS-68	
R28	1Meg			BTS-1Meg	
R29	1000Ω			BTS-1000	
R30	68Ω			BTS-68	
R31	2.2Meg			BTS-2.2Meg	
R32	220K			BTS-220K	
R33	47K			BTS-47K	
R34	470K			BTS-470K	
R35	220K			BTS-220K	
R36	220K			BTS-220K	
R37	1000Ω			BTS-1000	

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	Stromberg-Carlson PART No.	IRC PART No.	
R38	68Ω			BTS-68	
R39	100K			BTS-100K	
R40	2.2Meg			BTS-2.2Meg	
R41	470K			BTS-470K	
R42	68K			BTS-68K	
R43	68Ω			BTS-68	
R44	10K 5%			BTS-10K 5%	
R45	470K			BTS-470K	
R46	2200Ω			BTS-2200	
R47	10K 5%			BTS-10K 5%	
R48	15K			BTS-15K	
R49	100K			BTS-100K	
R50	5600Ω			BTS-5600	
R51	150K			BTS-150K	
R52	470K			BTS-470K	
R53	100K			BTS-100K	
R54	5600Ω			BTS-5600	
R55	1Meg			BTS-1Meg	
R56	47K			BTS-47K	
R57	1000Ω			BTS-1000	
R58	10Meg			BTS-10Meg	
R59	220K			BTS-220K	
R60	100K			BTS-100K	
R61	330K			BTS-330K	
R62	47K			BTS-47K	
R63	470K			BTS-470K	
R64	100K			BTS-100K	
R65	47K			BTS-47K	
R66	220K			BTS-220K	
R67	22K			BTS-22K	
R68	1800Ω			BTS-1800	
R69	27K 5%			BTS-27K 5%	
R70	1Meg			BTS-1Meg	
R71	47K 5%			BTS-47K 5%	

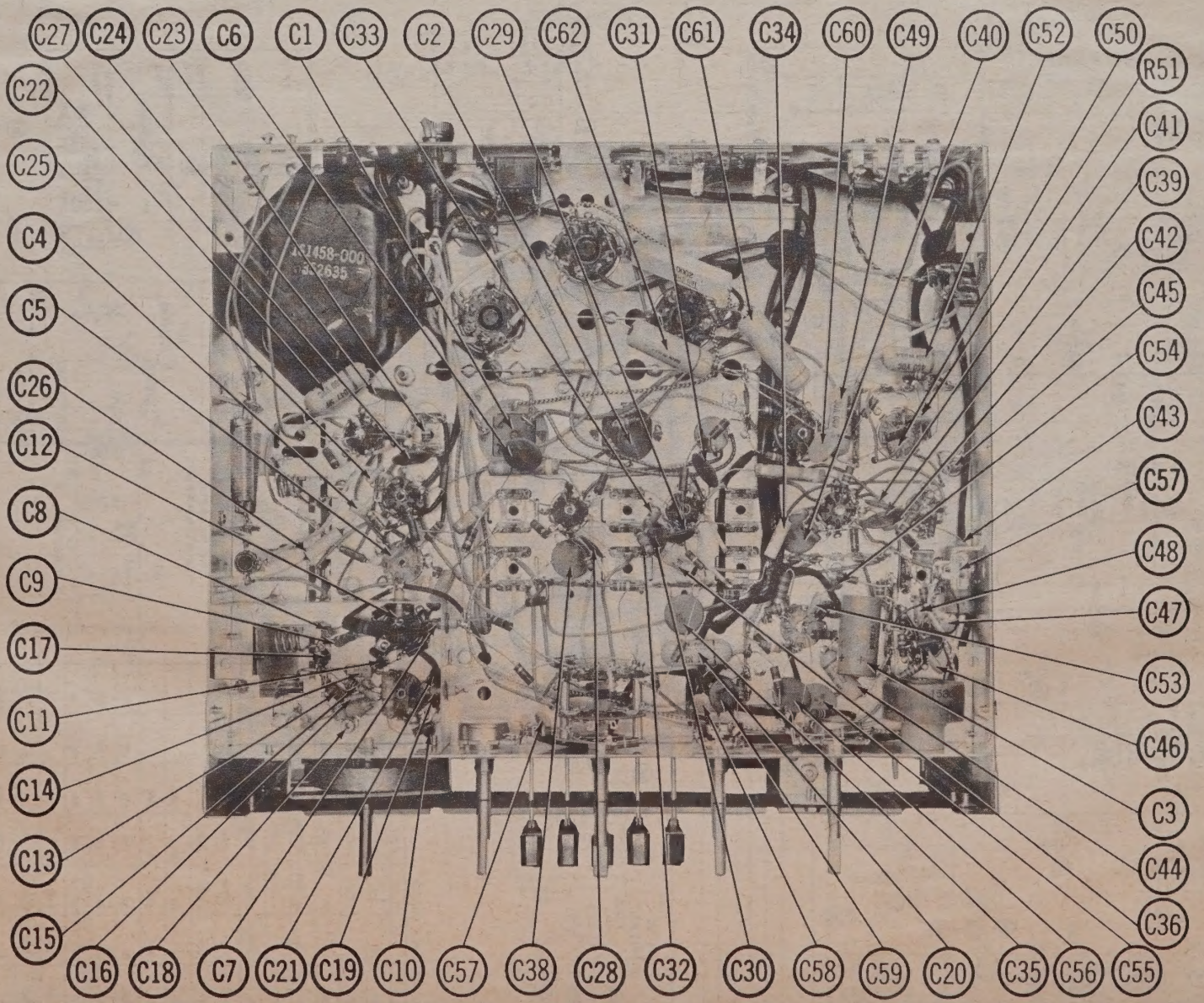
PARTS LIST AND DESCRIPTIONS (Continued)

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			Stromberg-Carlson PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	3AG	3A 250V			312003. (3AG 3A)	342001	AGC3	HKP

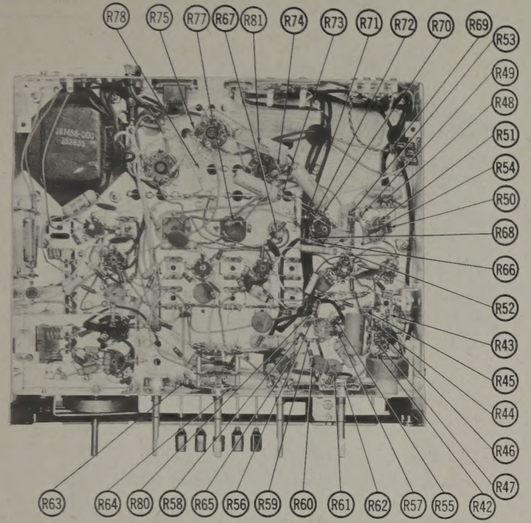
MISCELLANEOUS

ITEM No.	PART NAME	Stromberg-Carlson PART No.	NOTES
M2	Dial Light		#47
M3	Dial Light		#47
M4	Tuning Gang	110060-000	6 Gang (AM Sections: Ant. 35-495MMF, RF 28-342MMF, Osc. 21-138MMF)
M5	Switch	158688-000	Selector-Rotary Wafer Type
M6	Switch	158063-000	Pushbutton Assy.
	Knob	134302-000	Large
	Knob	134310-000	Small (With Dot)
	Pushbutton	107020-000	5 Used
	FM Dipole Ant.	139600-000	
	Dial Glass	122063-000	
	Dial Bezel	125080-000	
	Pointer	144031-000	
	Cabinet	108000-019	Mahogany

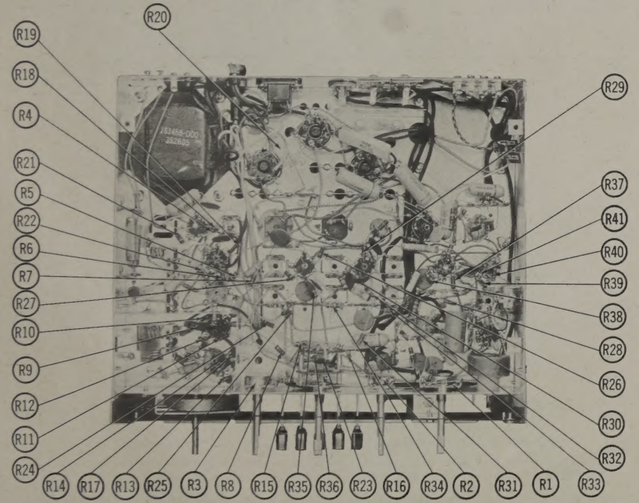


CHASSIS BOTTOM VIEW-CAPACITOR IDENTIFICATION

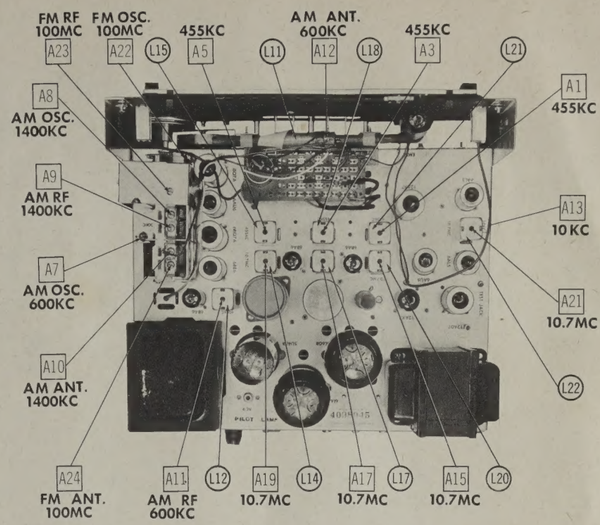
STROMBERG-CARLSON
MODEL SR-406



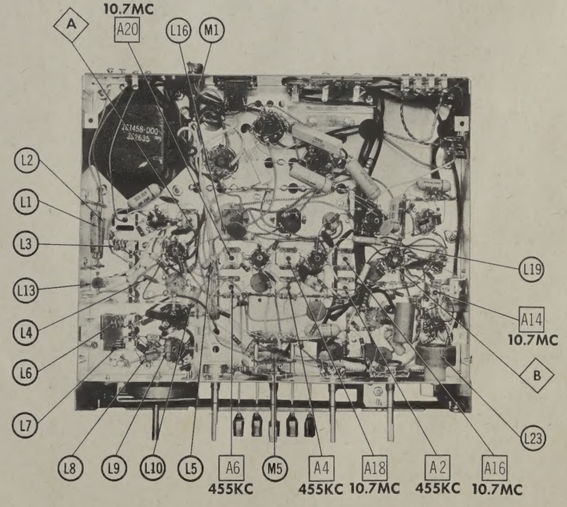
CHASSIS BOTTOM VIEW-RESISTOR IDENTIFICATION



CHASSIS-BOTTOM VIEW-RESISTOR IDENTIFICATION



CHASSIS TOP VIEW - ALIGNMENT & INDUCTOR IDENTIFICATION



CHASSIS BOTTOM VIEW - ALIGNMENT & INDUCTOR IDENTIFICATION

PARTS LIST AND DESCRIPTIONS

TUBES (GENERAL ELECTRIC, SYLVANIA)

ITEM No.	USE	TYPE	NOTES
V1	FM RF Amplifier	6BQ7A	
V2	FM Mixer	6BQ7A	
V3	FM Osc.-AFC	6BQ7A	
V4	AM RF Amplifier	6BA8	
V5	AM Converter	6BE8	
V6	AM Oscillator	6BA8	
V7	2nd. IF Amplifier	6BA8	
V8	3rd. FM IF Amplifier-Limiter and AFC	6AL5	
V9	Limiter	6AL5	
V10	Ratio Detector	6AL5	
V11	1st. Pream p.-Mic. Preamp.	12AD7	
V12	1st. AF Amplifier	12AX7	
	2nd. AF Amp.-Phase Inv.	12AX7	
V13	Class AB Amp.	6L6GT	
V14	Output	6L6GT	
V15	Tuning Indicator	EM68	
V16	Rectifier	5V4GB	
V17			

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT	Stromberg-Carlson PART No.	AEROVOX PART No.	CORNELL DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1A	▲30	500	110140-000	AF32-72	B9530	FY284	TMT-46	D-275	TVL-2973
B	■30	500							
C2A	●10	450	110098-000	AF33-44	C9350	FW97	TMT-40	T-170	TVL-3787
B	■40	450							
C	◆40	450							
C3	5	50	110098	PR50SY5	BR85-50	TC20	TD-5-50	MMT-0505	TVA-1303

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING CAP.	RATING VOLT	Stromberg-Carlson PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C4	100			SI 100	DR-101	L7EF1	GP-100	UC-531	5GA-T1	
C5	4000			BPD-00047	DD-103	BYAE1D1	ED-470	UC-5347	5GA-T47	
C6	10000			BPD-103	DD-103	BYAE1D1	ED-103	DC581	5HK-81	
C7	4000		110893-000	EF-001	MFT-1000					
C8	51			NPO-51 4.7	TC2-4R7	C10Y47C	TC0-4.7	2T-5547	9TCCB-Y47	NPO
C9	.47			NPO-47 .35	TC2-.35	C10Y35C	TC0-.35	2T-5435	9TCC-Q353	NPO
C10	1000			BPD-001	DD-102	BYAE1D1	ED-1000	DC521	5HK-D1	
C11	1000			BPD-001	DD-102	BYAE1D1	ED-1000	DC521	5HK-D1	
C12	1000		110893-000	EF-001	MFT-1000					
C13	100			SI 100	DR-101	L7EF1	GP-100	UC-531	5GA-T1	
C14	27			SI 27	DR-270	L7EQ27	GP-27	UC-5427	5GA-Q27	
C15	10			NPO-SI 10	TC2-10	C7AQ1C	TC0-10	2T-541	9TCC-Q	NPO
C16	2.2			NPO-SI 2.2	TC2-2R2	C10Y22C	TC0-2.2	NT-541	9TCCB-Y22	N750
C17	2.2									
C18	4-10		110885-000		MFT-1000					
C19	1000	300	110893-000	EF-001	DF-104	CUB32F1	ED-1000	GEM-401	82M-P1	88C-D1
C20	.1			P288N-1	DD-102	BYAE1D1		DC521	5HK-D1	
C21	1000			BPD-001						

PARTS LIST AND DESCRIPTIONS (Continued)

CAPACITORS (cont)

ITEM No.	RATING CAP.	RATING VOLT	Stromberg-Carlson PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	NOTES
C22	.047	400		BPD-05	DF-503	CUB4S47		GEM-4147	47M-S47	
C23	.1			BPD-104	DF-104		TCD-1		5TCCB-Y1	
C24	10000			BPD-103	DD-103	BYAE1D1	ED-103	DC581	5HK-81	
C25	10			N750-SI 10	TC2-10	C7AE8QU	TC0-10	NT-541	9TCC1-Q1	N750
C26	100			SI 100	DR-101	L7EF1	GP-100	UC-531	5GA-T1	
C27	1000			BPD-001	DD-102	BYAE1D1	ED-1000	DC521	5HK-D1	
C28	5000			BPD-005	DD-502	BYAE1D5	ED-005	DC525	5HK-D5	
C29	5000			BPD-005	DD-502	BYAE1D5	ED-005	DC525	5HK-D5	
C30	10000			BPD-005	DD-502	BYAE1D5	ED-005	DC525	5HK-D5	
C31	10000			BPD-01	DD-103	BYAE1D1	ED-01	DC581	5HK-81	
C32	47			SI 47	D8-470	L7EQ47	GP-47	UC-5447	5GA-Q47	
C33	47			SI 47	D8-470	L7EQ47	GP-47	UC-5447	5GA-Q47	
C34	100			SI 100	DD-101	L10T33	ED-330	UC-5333	5GA-T33	
C35	10000			BPD-01	DD-103	BYAE1D1	ED-01	DC581	5HK-81	
C36	10000			SI 100	D8-101	L7EF1	GP-100	UC-531	5GA-T1	
C37	90-370		110956-000							
C38	10000			BPD-01	DD-103	BYAE1D1	ED-01	DC581	5HK-81	
C39	10000			BPD-01	DD-103	BYAE1D1	ED-01	DC581	5HK-81	
C40	10000			BPD-01	DD-103	BYAE1D1	ED-01	DC581	5HK-81	
C41	10000			BPD-01	DD-103	BYAE1D1	ED-01	DC581	5HK-81	
C42	100			BPD-0001	DD-101	L10T1	ED-100	UC-531	5GA-T1	
C43	100			BPD-0001		CUB1F1		GEM-4122	27M-P22	
C44	.01	400		BPD-001	DD-102	MFT-1000	GP-1000	GEM-402	88C-D1	
C45	1000			EF-001	MFT-1000				88C-D1	
C46	330			BPD-00033	DD-331	L10T33	ED-330	UC-5333	5GA-T33	
C47	330			BPD-00033	DD-331	L10T33	ED-330	UC-5333	5GA-T33	
C48	330			BPD-00033	DD-331	L10T33	ED-330	UC-5333	5GA-T33	
C49	.047	400		BPD-05	DF-503	CUB4S47		GEM-4147	47M-S47	
C50	.047			BPD-05	DF-503	CUB4S47	ED-1000	DC-5347	5HK-D1	
C51	470			BPD-00047	D8-471	BYAU1D1	ED-470	UC-5347	5GA-T47	
C52	.047	400		BPD-05	DF-503	CUB4S47		GEM-4147	47M-S47	
C53	.047			BPD-05	DF-503	CUB4S47		DC-5347	5HK-D1	
C54	1000			BPD-0033	DD-103	L10T33	ED-330	UC-5333	5GA-T33	
C55	10000			BPD-01	DD-103	BYAE1D1	ED-01	DC581	5HK-81	
C56	10000			BPD-01	DD-103	BYAE1D1	ED-01	DC581	5HK-81	
C57	470			BPD-00047	D8-471	BYAU1D1	ED-470	UC-5347	5GA-T47	
C58	470			BPD-00047	D8-471	BYAU1D1	ED-470	UC-5347	5GA-T47	
C59	4700			BPD-00047	D8-472	BYAU2D1	ED-0047	UC-5347	5GA-Q47	
C60	4700			BPD-00047	D8-472	BYAU2D1	ED-0047	UC-5347	5GA-Q47	
C61	.047	600		BPD-05	DF-503	CUB6S47	ED-01	GEM-4147	47M-S47	
C62	.047	800		BPD-05	DF-503	CUB6S47		GEM-4147	47M-S47	

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	Stromberg-Carlson PART No.	IRC PART No.	
R72	2200Ω			BTS-2200	
R73	47K			BTS-47K	
R74	220K			BTS-220K	
R75	220K			BTS-220K	
R76	470K			BTS-470K	
R77	47K			BTS-47K	

ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	Stromberg-Carlson PART No.	IRC PART No.	
R78	10K	10		PW10-10K	
R79A	1000Ω	12	149543-000		
B	1000Ω	12			
R80	180Ω	1		BTA-180	
R81	2000Ω	10		PW10-2000	

TRANSFORMER (POWER)

ITEM No.	RATING				REPLACEMENT DATA					
	PRI.	SEC. 1	SEC. 2	SEC. 3	Stromberg-Carlson PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.
T1	117VAC @ 1.4A	720VCT @ .185A	5VAC @ 3A	6.3VAC @ 3.3A SEC. 4 6.3VAC @ 2.3A	161458-000					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES
	PRI.	SEC.	Stromberg-Carlson PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	5500Ω CT	25VCT Taps @ 16, 8 & 4Ω	161297-000						
	Turns Ratio								
	PRI.	SEC. 2							
	45:	1							

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		Stromberg-Carlson PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L1	Ant. Matching Trans.	114189-000			6202	
L2	Ant. Matching Trans.	114189-000			6202	
L3	FM Ant. Coil	114191-000				
L4	RF Neut. Coil	114193-000	19-1001		4606	1.7 Microhenry
L5	RF Choke	114693-000	19-1002	BC-563	4606	2.2 Microhenries, IRC Part #CLA
L6	FM RF Coil	114191-000				
L7	FM Osc. Coil	114190-000				
L8	Cathode Choke	114729-000			4588	.47 Microhenry, IRC Part #CLA
L9	RF Choke	114693-000	19-1002	BC-563	4606	2.2 Microhenries, IRC Part #CLA
L10	RF Choke	114729-000			4588	.47 Microhenry, IRC Part #CLA
L11	Loop Stick	139075-000				
L12	AM RF Trans.	114164-000				
L13	AM Osc. Coil	114188-000			70-Osc.	
L14	1st. FM IF	114363-000	16-3487	FM-254	1463	
L15	1st. AM IF	114469-000				
L16	Fil. Choke	114707-000			4588	.47 Microhenry, IRC Part #CL-1
L17	2nd. FM IF	114363-000	16-3487	FM-254	1463	
L18	2nd. AM IF	114469-000				
L19	Fil. Choke	114707-000			4588	.47 Microhenry, IRC Part #CL-1
L20	3rd. FM IF	114363-000	16-3487	FM-254	1463	
L21	3rd. AM IF	114468-000	16-6758	BC-353	12-C2	
L22	Ratio Det.	114467-000	17-3498	FM-255	1465	
L23	10KC Filter	153005-000				1 Henry

CHASSIS—TOP VIEW